Serial#: 10519366
STN & DIALOG

Access DB# 280108

EIC 1700
SEARCH REQUEST

SCIENTIFIC REFERENCE BR.
Sci & Tech Inf. Ctr.
DEC [illegible] RECD
Pat & T.M Office

Today's Date 12-9-08

Name Wayne Langel

AU/Org. 1793 Examiner # 60603

Bld.&Rm.# EO9A29 (Remsen) Phone [redacted]

Priority App. Filing Date 7-11-02

Case/App. # 10/519366

Format for Search Results

EMAIL ___ PAPER ✓

If this is a Board of Appeals case, check here ☐

Synonyms

Describe this invention in your own words.

Terms to avoid

Additional Comments

Please search for a soil additive comprising basalt, limestone, dolomite and claystone.

Please submit completed form to your EIC. SPE Signature here indicates Rush

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STAFF USE ONLY

Searcher

Type of Search

Vendors and cost where applicable

Serial#: 10519366
STN & DIALOG
TEXT SEARCH

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=> FILE HCAPLUS

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FILE COVERS 1907 - 11 Dec 2008  VOL 149 ISS 24
FILE LAST UPDATED: 10 Dec 2008  (20081210/ED)

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

L1   (     54439) SEA FILE=HCAPLUS ABB=ON  PLU=ON  BASALT OR TRAP(2A)ROCK OR
                  ((EXTRUSIVE(2A)IGNEOUS OR VOLCANIC)(2A)(ROCK)) OR SOLIDIFIED(2A
                  )LAVA
L2   (    337630) SEA FILE=HCAPLUS ABB=ON  PLU=ON  LIMESTONE OR CALCITE OR
                  AGGREGATE OR ((CARBONATE OR SEDIMENTARY)(2A) (ROCK)) OR
                  CALCIUM(2A)CARBONATE OR KEYSTONE OR COQUINA
L3   (    193443) SEA FILE=HCAPLUS ABB=ON  PLU=ON  DOLOMITE OR DOLOSTONE OR
                  ARCTIC(2A)FROST OR ANTIQUE(2A)WHITE OR AGGREGATE OR (CHEMICAL(2
                  A)SEDIMENTARY OR CARBONATE)(2A)ROCK OR ((CALCIUM(2A)MAGNESIUM)(
                  2A)(CARBONATE))
L4   (     32381) SEA FILE=HCAPLUS ABB=ON  PLU=ON  CLAYSTONE OR CLAY(2A)STONE OR
                  SEDIMENTARY(2A)ROCK OR ARGILLITE
L10       181816 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ("SOIL AMENDMENTS"/CT OR
                  "SOIL CONDITIONERS"/CT OR "SOIL IMPROVERS"/CT OR COMPOST/CT OR
                  MULCHES/CT OR "SOIL LIMING AGENTS"/CT OR "AGRICULTURE AND
                  AGRICULTURAL CHEMISTRY"/CT OR FERTILIZERS/CT OR MANURE/CT OR
                  PEAT/CT OR SAPROPEL/CT OR "SOIL FERTILITY"/CT OR "SOIL
                  RECLAMATION"/CT) OR "WASTEWATER TREATMENT SLUDGE"/CT OR SOIL
                  (A) (AMENDMENT OR ADDITIVE)
L11          632 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1 AND L2 AND L3 AND L4
L12            3 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L11 AND L10
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L12 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:630698 HCAPLUS Full-text
DOCUMENT NUMBER: 145:88807
TITLE: Filter sand with ammonium exchange capacity comprising sedimentary rocks and/or minerals used for wastewater treatment
PATENT ASSIGNEE(S): Herrmann, Thilo, Germany
SOURCE: Ger. Offen., 6 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 102004019910	A1	20060629	DE 2004-102004019910	20040421
PRIORITY APPLN. INFO.:			DE 2004-102004019910	20040421

AB The invention concerns a filter sand, which is used in soil filters for the wastewater treatment. The filter sand comprises an ammonium exchange capacity by the use of certain kinds of sedimentary rocks and/or minerals with aggregates for the removal of NH3. The filter sand is manufactured by screening, elutriation, breaking, and/or ballasting of sediments and rocks and addnl. aggregates. The filter sand is applied in activated sludge basins within wastewater treatment plants.

L12 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:60612 HCAPLUS Full-text
DOCUMENT NUMBER: 140:81058
TITLE: A soil additive management and remediation of acidic and acid sulfate soils
INVENTOR(S): Treers, Huw; Sheehy, Donna
PATENT ASSIGNEE(S): Australia
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004007638	A1	20040122	WO 2003-AU642	20030526
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2492569	A1	20040122	CA 2003-2492569	20030526
AU 2003229102	A1	20040202	AU 2003-229102	20030526
AU 2003229102	B2	20071025		

NZ 538060	A	20050527	NZ 2003-538060	20030526
BR 2003012856	A	20050614	BR 2003-12856	20030526
EP 1539903	A1	20050615	EP 2003-724631	20030526
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1671822	A	20050921	CN 2003-816475	20030526
CN 1277903	C	20061004		
ZA 2004010337	A	20051017	ZA 2004-10337	20041222
MX 2005PA00437	A	20050722	MX 2005-PA437	20050107
US 20060130397	A1	20060622	US 2005-519366	20051013
PRIORITY APPLN. INFO.:			AU 2002-950123 A	20020711
			WO 2003-AU642 W	20030526

AB A soil additive is produced from crushing, grinding and blending specified source rocks wherein a final product contains at least three of andesite, basalt, limestone, dolomite and claystone. The final product has a modal abundance of basalt in the range of 11-91, limestone 1-59, dolomite 0.025-30, and claystone 0-17.5%. The invention can be used in the following applications: (a) for the development, management and remediation of acidic and acid sulfate soils (ASS); (b) for remediation of alkaline soils, acidic materials and leachate; (c) for use in agricultural operations located on saline soils to enhance plant tolerance to saline conditions; (d) for use in agricultural practices located on ASS and acidic soils to enhance plant tolerance to saline conditions where tidal flushing practices are used to buffer drain acidity; (e) for the management and remediation of industrial waste; and (f) for general use as a partial or full replacement of traditional carbonate derived limestone and liming products to reduce greenhouse gas emissions.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:389164 HCAPLUS Full-text
DOCUMENT NUMBER: 127:9108
ORIGINAL REFERENCE NO.: 127:1833a,1836a
TITLE: Use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes
INVENTOR(S): Roller, Iris
PATENT ASSIGNEE(S): Roller, Iris, Germany
SOURCE: Ger. Offen., 9 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19541735	A1	19970515	DE 1995-19541735	19951109
PRIORITY APPLN. INFO.:			DE 1995-19541735	19951109

AB By enrichment of body fluids through administration of nanocryst. mineral salts, photoconductors, and organic compds. from hydrothermal mineral deposits, the resonance effects of light quanta on the body are improved in a material- and frequency-specific manner to promote cleansing of waste deposits from the cells and clearance of toxins from the body. These agents may be combined with other therapeutic minerals, mineral waters, and carriers to produce pharmaceutical prepns. for oral hygiene, treatment of skin diseases, etc. (no data).

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=> D IBIB IT L12 1 3

L12  ANSWER 1 OF 3  HCAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         2006:630698  HCAPLUS  Full-text
DOCUMENT NUMBER:          145:88807
TITLE:                    Filter sand with ammonium exchange capacity comprising
                          sedimentary rocks and/or minerals
                          used for wastewater treatment
PATENT ASSIGNEE(S):       Herrmann, Thilo, Germany
SOURCE:                   Ger. Offen., 6 pp.
                          CODEN: GWXXBX
DOCUMENT TYPE:            Patent
LANGUAGE:                 German
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     DE 102004019910       A1    20060629    DE 2004-102004019910    20040421
PRIORITY APPLN. INFO.:                       DE 2004-102004019910    20040421
IT   Wastes
        (biol.; in filter sand with ammonium exchange capacity used for
        wastewater treatment)
IT   Schist
     RL: TEM (Technical or engineered material use); USES (Uses)
        (biotite; in filter sand with ammonium exchange capacity used for
        wastewater treatment)
IT   Wood
        (chips; in filter sand with ammonium exchange capacity used for
        wastewater treatment)
IT   Clays, uses
     RL: TEM (Technical or engineered material use); USES (Uses)
        (expanded; in filter sand with ammonium exchange capacity used for
        wastewater treatment)
IT   Wastewater treatment
        (filtration, sand; filter sand with ammonium exchange capacity
        comprising sedimentary rocks and/or minerals used
        for)
IT   Zeolites (synthetic), uses
     RL: TEM (Technical or engineered material use); USES (Uses)
        (heulandite-type; in filter sand with ammonium exchange capacity used
        for wastewater treatment)
IT   Compost
     Paper
     Straw
        (in filter sand with ammonium exchange capacity used for wastewater
        treatment)
IT   Amphibole-group minerals
     Apatite-group minerals
       Basalt
       Claystone
     Clinoptilolite-type zeolites
     Diabase
     Feldspar-group minerals
     Gneiss
     Granite, uses
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Graywacke
Igneous rocks, uses
Metamorphic rocks
Mica schist
Mica-group minerals, uses
Olivine-group minerals
Porphyry
Pyroxene-group minerals
Schist
RL: TEM (Technical or engineered material use); USES (Uses)
(in filter sand with ammonium exchange capacity used for wastewater treatment)

IT Wastewater treatment
(ion exchange; filter sand with ammonium exchange capacity comprising sedimentary rocks and/or minerals used for)

IT Filters
(sand filters; with ammonium exchange capacity comprising sedimentary rocks and/or minerals)

IT Minerals, uses
Zeolites (synthetic), uses
RL: TEM (Technical or engineered material use); USES (Uses)
(silver-doped with; in filter sand with ammonium exchange capacity used for wastewater treatment)

IT 7440-44-0, Carbon, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(activated; in filter sand with ammonium exchange capacity used for wastewater treatment)

IT 57-13-6, Urea, processes 7664-41-7, Ammonia, processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); REM (Removal or disposal); PROC (Process)
(filter sand with ammonium exchange capacity comprising sedimentary rocks and/or minerals used for removing)

IT 7440-22-4, Silver, uses
RL: MOA (Modifier or additive use); USES (Uses)
(in filter sand with ammonium exchange capacity used for wastewater treatment)

IT 471-34-1, Calciumcarbonate, uses 1306-05-4, Fluorapatite 1306-06-5, Hydroxylapatite 1309-36-0, Pyrite, uses 1317-66-4, Marcasite 7757-93-9, Dicalciumphosphate 12172-71-3, Allophane 13397-26-7, Calcite, uses 13767-12-9, Octacalciumphosphate 13824-49-2, Strengite 13824-50-5, Variscite 14476-16-5, Siderite 14567-67-0, Vivianite 14762-49-3, Gibbsite 14808-60-7, Quartz, uses 15490-91-2, Struvite
RL: TEM (Technical or engineered material use); USES (Uses)
(in filter sand with ammonium exchange capacity used for wastewater treatment)

L12 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:389164 HCAPLUS Full-text
DOCUMENT NUMBER: 127:9108
ORIGINAL REFERENCE NO.: 127:1833a,1836a
TITLE: Use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes
INVENTOR(S): Roller, Iris
PATENT ASSIGNEE(S): Roller, Iris, Germany
SOURCE: Ger. Offen., 9 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent

LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19541735	A1	19970515	DE 1995-19541735	19951109
PRIORITY APPLN. INFO.:			DE 1995-19541735	19951109

IT Dentifrices
(anticalculus; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Hair preparations
(antidandruff; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Drug delivery systems
(beads; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Nail (anatomical)
(brittle, treatment of; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Drug delivery systems
(capsules; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Skin
(cellulite; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Wound healing promoters
(cicatrizants; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Drug delivery systems
(colloids; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Acne
(comedo; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Hair preparations
(conditioners; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Asbestos
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(crocidolite; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Edema
(crural, treatment of; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Trace elements, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(deficiency, treatment of; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Beverages
Food
(dietetic; use of nanodisperse hydrothermal mineral deposits to improve

resonance effects of light quanta for health purposes)
IT Mouth
Tooth
(disease; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Hair
(diseases; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Drug delivery systems
(drops; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Skin, disease
(dry; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Leg
(edema in, treatment of; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Beverages
(electrolyte-containing; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Drug delivery systems
(elixirs; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Wood
Wood
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fossil; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Geological sediments
(geothermal; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Springs (bodies of water)
(geysers; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Gingiva
(gingivitis, treatment of; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Runoff
(glacial; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Mouth
(halitosis; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Vein
(hemorrhoid; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Drug delivery systems
(homeopathic; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Springs (bodies of water)
(hot; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Food
(infant; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)

IT Drug delivery systems
(infusions; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Drug delivery systems
(inhalants; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Fertilizers
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(mineral; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Tektites
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(moldavites; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Drug delivery systems
(muds, fango; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Disperse systems
(nano-; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Groundwaters
(peatland; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Periodontium
(periodontosis, treatment of; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Resonance
(photon; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Bauxite
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(red; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Photon
(resonance effect; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Feldspar-group minerals
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(sodium; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Drug delivery systems
(sustained-release; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Wetland waters
(swamp; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Drug delivery systems
(tablets; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Drug delivery systems
(tinctures; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)

IT Drug delivery systems
(topical; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Acne
Allergy inhibitors
Antiperspirants
Bath preparations
Chewing gum
Cosmetics
Dentifrices
Deodorants
Eczema
Erythema
Food additives
Gases
Hydrothermal vent sediments
Jewelry
Lake waters
Meteorites
Mouthwashes
Nanocrystals
Perfumes
Photoconductors
Phototherapy
Psoriasis
River waters
Seawater
Skin, disease
Skin preparations (pharmaceutical)
Springs (bodies of water)
Sunscreens
Veterinary medicine
Wart
(use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)
IT Amber
Asphalt
Basalt
Bicarbonates
Bojite
Brines
Ceramics
Chert
Coal, biological studies
Coral
Feldspar-group minerals
Gemstones
Gneiss
Granite, biological studies
Lapis lazuli
Lignite
Marble
Metals, biological studies
Metamorphic rocks
Mica-group minerals, biological studies
Mineral elements, biological studies
Minerals, biological studies
Obsidian
Olivine-group minerals

Onyx marble
Oxides (inorganic), biological studies
Pearl
Pegmatite
Petroleum, biological studies
Plagioclase-group minerals
Plutonic rocks
Porphyry
Potassium feldspars
Rhyolite
Sandstone
Sedimentary rocks
Serpentine-group minerals
Serpentinite
Silicates, biological studies
Siliceous sinter
Slate
Soaps
Sulfates, biological studies
Sulfur ores
Tourmaline-group minerals
Volcanic rocks
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)

IT Vein
(varicose vein; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)

IT Fossils
Fossils
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(wood; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)

IT 7782-44-7, Oxygen, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(dissolved; use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)

IT 65-85-0, Benzoic acid, biological studies 110-15-6, Butanedioic acid, biological studies 463-79-6, Carbonic acid, biological studies 471-34-1, Calcium carbonate, biological studies 868-14-4, Tartar, biological studies 1302-12-1, Stephanite 1302-27-8, Biotite ((Fe0.4-0.8Mg0.2-0.6)3K(Si3Al)[(OH)0.5-1F0-0.5]2O10) 1302-37-0, Spodumene 1302-52-9, Beryl (Al2Be3(SiO3)6) 1302-54-1, Anorthite 1302-59-6, Topaz (Al2[F0.5-1(OH)0-0.5]2SiO4) 1302-62-1, Almandine 1302-67-6, Spinel (Mg(AlO2)2) 1302-68-7, Pyrope 1302-74-5, Corundum, biological studies 1302-76-7, Disthene 1302-83-6, Lazurite (Ca2Na6[Al6(SiO4)6(SO4)S]) 1302-90-5, Sodalite (Na4[Al3Cl(SiO4)3]) 1303-56-6, Calaverite 1303-63-5, Krennerite 1304-50-3, Chrysoberyl 1308-08-3, Linnaeite (Co3S4) 1308-82-3, Bornite 1309-36-0, Pyrite, biological studies 1309-38-2, Magnetite (Fe3O4), biological studies 1309-55-3, Hausmannite 1310-50-5, Pyrrhotite (FeS) 1310-98-1, Manganite 1317-60-8, Hematite, biological studies 1317-64-2, Lepidolite ((Li1.5-2Al1-1.5)K(Si3-4Al0-1)[F0.5-1(OH)0-0.5]2O10)

1317-66-4, Marcasite 1317-80-2, Rutile 1317-82-4, Sapphire 1317-86-8, Antimonite 1318-31-6, Clinozoisite 1318-49-6, Epidote ([Al2(Fe0.5-1Al0-0.5)]Ca2(OH)(SiO4)3) 1318-50-9, Epistilbite 1318-63-4, Heulandite 1318-68-9, Howlite 1319-32-0, Turquoise (Al6CuO4(PO4)4.9H2O) 1319-37-5, Vesuvianite (Al4Ca10Mg2(SiO4)9.2H2O) 1319-42-2, Zoisite 1319-45-5, Azurite 1319-53-5, Malachite 1327-51-1, Aquamarine 7429-90-5, Aluminum, biological studies 7439-89-6, Iron, biological studies 7439-93-2, Lithium, biological studies 7439-95-4, Magnesium, biological studies 7439-98-7, Molybdenum, biological studies 7440-06-4, Platinum, biological studies 7440-09-7, Potassium, biological studies 7440-22-4, Silver, biological studies 7440-23-5, Sodium, biological studies 7440-32-6, Titanium, biological studies 7440-47-3, Chromium, biological studies 7440-48-4, Cobalt, biological studies 7440-57-5, Gold, biological studies 7440-66-6, Zinc, biological studies 7440-70-2, Calcium, biological studies 7699-41-4, Metasilicic acid 7704-34-9, Sulfur, biological studies 7726-95-6, Bromine, biological studies 7782-40-3, Diamond, biological studies 7782-41-4, Fluorine, biological studies 7782-42-5, Graphite, biological studies 7782-49-2, Selenium, biological studies 12002-98-1, Hessite 12003-54-2, Jadeite 12027-58-6, Prehnite 12031-63-9, Lithium niobium oxide (LiNbO3) 12035-49-3, Ullmannite 12043-63-9, Buergerite 12043-98-0, Dumortierite 12135-61-4, Sphene 12138-06-6, Wurtzite 12168-52-4, Ilmenite 12169-28-7, Zinc blende 12172-67-7, Actinolite (Ca2[(Mg0.5-0.89Fe0.11-0.5)4.5-5Al0-0.5](Si7.5-8Al0-0.5)(OH)2O22) 12172-74-6, Ankerite (Ca(Fe0.5-1Mg0-0.5Mn0-0.5)(CO3)2) 12173-08-9, Chrysoprase 12173-51-2, Herderite 12173-78-3, Labradorite 12174-03-7, Nephrite 12174-04-8, Neptunite 12174-49-1, Ruby 12177-68-3, Portlandite 12178-42-6, Hornblende 12183-80-1, Andalusite 12188-41-9, Brookite 12197-81-8, Elbaite 12244-10-9, Albite 12251-44-4, Orthoclase 12251-51-3, Heliodor 12252-02-7, Alexandrite 12253-05-3, Thulite 12253-73-5, Dravite 12269-78-2, Pyrophyllite (AlH(SiO3)2) 12274-72-5, Purpurite 12279-65-1, Nacrite 12284-86-5, Sanidine (Al(K0.5-1Na0-0.5)Si3O8) 12285-42-6, Carrollite ((Co0.5-1Ni0-0.5)2CuS4) 12286-79-2, Demantoid (Ca3Fe2(SiO4)3) 12321-84-5, Kunzite 12403-33-7, Tunisite 12413-42-2, Amazonite 12414-55-0, Sard 12414-61-8, Chiastolite 12414-85-6, Creedite 12415-33-7, Emerald (Al2Be3(SiO3)6) 12416-45-4, Hessonite 12416-87-4, Indigolite 12418-11-0, Hiddenite 12420-01-8, Moonstone 12424-45-2, Schorl 12425-43-3, Tsilaisite 12426-32-3, Uvite 12509-51-2, Morganite 12601-21-7, Jade 12738-89-5, Titanium hydroxide oxide 13397-26-7, Calcite, biological studies 13460-50-9, Boric acid (HBO2) 13717-00-5, Magnesite 13816-47-2, Pectolite 13824-50-5, Variscite (Al(PO4).2H2O) 14291-02-2, Celestine 14476-12-1, Rhodochrosite 14476-16-5, Siderite 14476-25-6, Smithsonite 14483-19-3, Diopside 14542-23-5, Fluorite, biological studies 14567-57-8, Rhodonite 14567-72-7, Uvarovite 14639-88-4, Opal (SiO2.xH2O) 14639-89-5, Chalcedony 14762-51-7, Halite 14791-73-2, Aragonite 14798-03-9, Ammonium, biological studies 14798-04-0, Anhydrite 14808-60-7, Quartz, biological studies 14832-86-1, Smoky quartz 14832-91-8, Amethyst 14832-92-9, Citrine 14854-26-3, Pyrolusite 14940-68-2, Zircon 14998-27-7, Chlorite 15078-96-3, Andradite 15501-73-2, Sellaite 15606-25-4, Dioptase 15698-85-8, Selenite (Ca(SO4).2H2O) 15723-40-7, Agate 16389-88-1, Dolomite , biological studies 16610-72-3, Hyalite 18587-85-4, Jasper (SiO2) 18616-69-8, Kutnohorite (Ca(Mn0.5-1Fe0-0.5Mg0-0.5)(CO3)2) 20461-54-5, Iodide, biological studies 21112-20-9, Chalcosine 31654-78-1, Heliotrope (SiO2) 51434-46-9, Tanzanite 58572-15-9, Apophyllite (Ca4(K0-1Na0-1)Si8[F0-1(OH)0-1]O20.8H2O) 60676-86-0, Silica, fused 62996-86-5, Sugilite 63800-37-3, Sepiolite (Mg2H2(SiO3)3.xH2O)

66256-85-7, Liddicoatite 66256-98-2, Charoite 83380-59-0, Petersite 102849-94-5, Peridot 106958-50-3, Chloromelanite
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(use of nanodisperse hydrothermal mineral deposits to improve resonance effects of light quanta for health purposes)

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L1  (     54439) SEA FILE=HCAPLUS ABB=ON  PLU=ON  BASALT OR TRAP(2A)ROCK OR
                 ((EXTRUSIVE(2A)IGNEOUS OR VOLCANIC)(2A)(ROCK)) OR SOLIDIFIED(2A
                 )LAVA
L2  (    337630) SEA FILE=HCAPLUS ABB=ON  PLU=ON  LIMESTONE OR CALCITE OR
                 AGGREGATE OR ((CARBONATE OR SEDIMENTARY)(2A) (ROCK)) OR
                 CALCIUM(2A)CARBONATE OR KEYSTONE OR COQUINA
L3  (    193443) SEA FILE=HCAPLUS ABB=ON  PLU=ON  DOLOMITE OR DOLOSTONE OR
                 ARCTIC(2A)FROST OR ANTIQUE(2A)WHITE OR AGGREGATE OR (CHEMICAL(2
                 A)SEDIMENTARY OR CARBONATE)(2A)ROCK OR ((CALCIUM(2A)MAGNESIUM)(
                 2A)(CARBONATE))
L4  (     32381) SEA FILE=HCAPLUS ABB=ON  PLU=ON  CLAYSTONE OR CLAY(2A)STONE OR
                 SEDIMENTARY(2A)ROCK OR ARGILLITE
L5  (       632) SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1 AND L2 AND L3 AND L4
L10      181816  SEA FILE=HCAPLUS ABB=ON  PLU=ON  ("SOIL AMENDMENTS"/CT OR
                 "SOIL CONDITIONERS"/CT OR "SOIL IMPROVERS"/CT OR COMPOST/CT OR
                 MULCHES/CT OR "SOIL LIMING AGENTS"/CT OR "AGRICULTURE AND
                 AGRICULTURAL CHEMISTRY"/CT OR FERTILIZERS/CT OR MANURE/CT OR
                 PEAT/CT OR SAPROPEL/CT OR "SOIL FERTILITY"/CT OR "SOIL
                 RECLAMATION"/CT) OR "WASTEWATER TREATMENT SLUDGE"/CT OR SOIL
                 (A) (AMENDMENT OR ADDITIVE)
L11          632 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1 AND L2 AND L3 AND L4
L12            3 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L11 AND L10
L13           29 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5 AND SOIL
L14           27 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13 NOT L12
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L14 ANSWER 1 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:515298 HCAPLUS Full-text
DOCUMENT NUMBER: 148:214306
TITLE: Rule of distribution and transference of copper, manganese, zinc, magnesium and potassium from rock and soil to forage in the main geological background areas of Yunnan province
AUTHOR(S): Deng, Weidong; Xi, Dongmei; Mao, Huaming; Gao, Hongguang
CORPORATE SOURCE: College of Animal Science and Technology, Yunnan Agricultural University, Kunming, Yunnan Province, 650201, Peop. Rep. China
SOURCE: Turang Tongbao (2006), 37(1), 116-120
CODEN: TUTOEG; ISSN: 0564-3945
PUBLISHER: Turang Xuebao Bianji Weiyuanhui
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB The geol. background could be divided into three classes by analysising the contents of copper, manganese, zinc, magnesium and potassium in rock, soil and forage, resp. The best areas were red earth area of paleozoic basalt and red earth area of carbonate, in which the physicochem. characteristics were best of all, and the contents of copper, manganese, zinc, magnesium and potassium

in soil and feeds were higher than the others. The second area was yellow-red earth area of mixed type of carbonate, clastic rock and basalt. The third areas were purple earth area of mesozoic clastic rock, yellow-red earth area of clastic rock, dark red earth area of precambrian metamorphic rock, in which the contents of copper, manganese, zinc, magnesium and potassium in soil and forage were lower than the others. The contents of copper, manganese, zinc, magnesium and potassium in forage were little affected by the geol. background especially by enrichment of microelements in soil.

L14 ANSWER 2 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:1198443 HCAPLUS Full-text
DOCUMENT NUMBER: 147:122011
TITLE: Geology, mineralogy and origin of clay minerals of the Pliocene fluvial-lacustrine deposits in the Cappadocian volcanic province, central Anatolia, Turkey
AUTHOR(S): Gurel, Ali; Kadir, Selahattin
CORPORATE SOURCE: Department of Geological Engineering, Nigde University, Nigde, 51200, Turk.
SOURCE: Clays and Clay Minerals (2006), 54(5), 555-570
CODEN: CLCMAB; ISSN: 0009-8604
PUBLISHER: Clay Minerals Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The Guzeloz-Incesu Plateaus are situated in the central and eastern parts of the Cappadocian volcanic province (central Anatolia). This province contains many ignimbrite levels, andesite, basalt intercalated with several paleosols, calcrete, carbonate, fluvial sediments, diatomaceous clayey sediments and pyroclastic sedimentary levels. The presence of mottling, sesquioxide, root traces, rhizoids and burrows in continuous, finely bedded and laminated sediments, paleosols, calcrete, the occurrence of bone- and teeth-bearing reworked pyroclastic materials, and the description of the lithofacies in the study area indicate fluvial and shallow-lake environments. These environments are dominated by smectite and illite, with traces of kaolinite, associated mainly with plagioclase, K-feldspar, quartz, calcite, opal-CT, pyroxene (diopside, rare hypersthene), and locally trace amts. of gypsum and sepiolite. Smectite predominates in paleosols and calcrete units, and generally increases upwards in the profiles, coinciding with a gradual increase in the degree of alteration. Partial to complete alteration of plagioclase, K-feldspar, pyroxene and partial devitrification of glass-shard particles in pyroclastic rocks, development of microsparitic to sparitic cement comprising euhedral rhombic calcite crystals between irregular clay nodules in paleosol and calcrete samples, along with the occurrence of dogtooth-type sparitic crystals in fractures, desiccation cracks and geopetal-type fenestrae, indicate alternating periods of drought and wet, resulting in the development of paleosols and calcretes. Micromorphol. development of spongiform smectite on mainly relict feldspar and, locally, on glass shards, indicates an authigenic origin, whereas illite formed either authigenically or by conversion of smectite to illite-smectite.
REFERENCE COUNT: 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 3 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:473353 HCAPLUS Full-text
DOCUMENT NUMBER: 145:255121
TITLE: Arsenic in the shallow ground waters of conterminous United States: assessment, health risks, and costs for MCL compliance

AUTHOR(S): Kumar, Navin; Twarakavi, C.; Kaluarachchi, Jagath J.
CORPORATE SOURCE: University of Alaska-Fairbanks, Fairbanks, AK, 99775, USA
SOURCE: Journal of the American Water Resources Association (2006), 42(2), 275-294
CODEN: JWRAF5; ISSN: 1093-474X
PUBLISHER: American Water Resources Association
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A methodol. consisting of ordinal logistic regression (OLR) is used to predict the probability of occurrence of arsenic concns. in different threshold limits in shallow ground waters of the conterminous United States (CONUS) subject to a set of influencing variables. The anal. considered a number of maximum contaminant level (MCL) options as threshold values to estimate the probabilities of occurrence of arsenic in ranges defined by a given MCL of 3, 5, 10, 20, and 50 μg/l and a detection limit of 1 μg/l. The fit between the observed and predicted probability of occurrence was around 83 percent for all MCL options. The estimated probabilities were used to estimate the median background concentration of arsenic in the CONUS. The shallow ground water of the western United States is more vulnerable than the eastern United States. Arizona, Utah, Nevada, and California in particular are hotspots for arsenic contamination. The risk assessment showed that counties in southern California, Arizona, Florida, and Washington and a few others scattered throughout the CONUS face a high risk from arsenic exposure through untreated ground water consumption. A simple cost effectiveness anal. was performed to understand the household costs for MCL compliance in using arsenic contaminated ground water. The results showed that the current MCL of 10 μg/l is a good compromise based on existing treatment technologies.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 4 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:172761 HCAPLUS Full-text
DOCUMENT NUMBER: 145:360474
TITLE: Lithologic composition of the Earth's continental surfaces derived from a new digital map emphasizing riverine material transfer
AUTHOR(S): Durr, Hans H.; Meybeck, Michel; Durr, Stefan H.
CORPORATE SOURCE: UMR Sisyphe 7619, Universite Pierre et Marie Curie/CNRS, Paris, Fr.
SOURCE: Global Biogeochemical Cycles (2005), 19(4), GB4S10/1-GB4S10/22, 1 plate
CODEN: GBCYEP; ISSN: 0886-6236
PUBLISHER: American Geophysical Union
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A new digital map of the lithol. of the continental surfaces is proposed in vector mode (n ≈ 8300, reaggregated at 0.5° + 0.5° resolution) for 15 rock types (plus water and ice) targeted to surficial Earth system anal. (chemical weathering, land erosion, carbon cycling, sediment formation, riverine fluxes, aquifer typol., coastal erosion). These types include acid (0.98% at global scale) and basic (5.75%) volcanics, acid (7.23%) and basic (0.20%) plutonics, Precambrian basement (11.52%) and metamorphic rocks (4.07%), consolidated siliciclastic rocks (16.28%), mixed sedimentary (7.75%), carbonates (10.40%), semi- to un-consolidated sedimentary rocks (10.05%), alluvial deposits (15.48%), loess (2.62%), dunes (1.54%) and evaporites (0.12%). Where sediments, volcanics and metamorphosed rocks are too intimately mixed, a complex lithol. (5.45%) class is added. Average composition is then tabulated for continents, ocean drainage basins, relief types (n = 7), 10° latitudinal

bands, geol. periods (n = 7), and exorheic vs. endorheic domain and for formerly glaciated regions. Surficial lithol. is highly heterogeneous and major differences are noted in any of these ensembles. Expected findings include the importance of alluvium and unconsolidated deposits in plains and lowlands, of Precambrian and metamorphic rocks in mid-mountain areas, the occurrence of loess, dunes and evaporites in dry regions, and of carbonates in Europe. Less expected are the large occurrences of volcanics (74% of their outcrops) in highly dissected relief and the importance of loess in South America. Prevalence of carbonate rocks between 15°N and 65°N and of Precambrian plus metamorphics in two bands (25°S-15°N and north of 55°N) is confirmed. Asia and the Atlantic Ocean drainage basin, without Mediterranean and Black Sea, are the most representative ensembles. In cratons the influence of ancient geol. periods is often masked by young sediments, while active orogens have a specific composition

REFERENCE COUNT: 97 THERE ARE 97 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 5 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:843927 HCAPLUS Full-text
DOCUMENT NUMBER: 144:236422
TITLE: 40Ar/39Ar age of a young rejuvenation basalt flow: Implications for the duration of volcanism and the timing of carbonate platform development during the Quaternary on Kaua'i, Hawaiian islands
AUTHOR(S): Hearty, Paul J.; Karner, Daniel B.; Renne, Paul R.; Olson, Storrs L.; Fletcher, Siobhan
CORPORATE SOURCE: School of Earth and Environmental Sciences, University of Wollongong, Wollongong, NSW 2522, Australia
SOURCE: New Zealand Journal of Geology and Geophysics (2005), 48(2), 199-211
CODEN: NEZOAY; ISSN: 0028-8306
PUBLISHER: RSNZ Publishing
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Remnants of an extensive carbonate platform crop out along the southeast coast of Kaua'i, Hawaii. A basalt flow within this succession has a whole-rock 40Ar/39Ar step-heating plateau age of 375 ± 4 kyr. The plateau age, which we interpret as the eruption age, indicates that rejuvenation volcanism persisted on Kaua'i for considerably longer (.apprx. 200 000 yr) than previously thought, and also that published whole-rock K-Ar detns. may not accurately reflect eruption ages. The succession of younger sedimentary deposits and age of the basalt imply that the eruption occurred near the end of marine isotope stage (MIS) 11. Preservation of limestone dune assemblages and extensive paleosols above present-day sea level indicates that Kaua'i underwent a period of emergence during the early and middle Pleistocene, probably due to passage over the lithospheric arch or fore bulge created by crustal loading of Maui Nui. The presence of at least eight major limestone-soil "couplets", together with extrapolated ages from the 40Ar/39Ar dating, make this the oldest surficial record of limestone formation in the Hawaiian Islands. This work provides a framework for further interpretation of the stratigraphy and paleoecol. of Kaua'i and the tropical Hawaiian Islands.

REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 6 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:415630 HCAPLUS Full-text
DOCUMENT NUMBER: 143:199184
TITLE: Potential anthropogenic mobilisation of mercury and arsenic from soils on mineralized rocks,

Northland, New Zealand
AUTHOR(S): Craw, D.
CORPORATE SOURCE: Geology Department and Environmental Science Programme, University of Otago, Dunedin, N. Z.
SOURCE: Journal of Environmental Management (2005), 74(3), 283-292
CODEN: JEVMAW; ISSN: 0301-4797
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Eroded roots of hot spring systems in Northland, New Zealand consist of mineralized rocks containing sulfide minerals. Marcasite and cinnabar are the dominant sulfides with subordinate pyrite. Deep weathering and leached soil formation has occurred in a warm temperate to subtropical climate with up to 3 m/yr rainfall. Decomposition of the iron sulfides in natural and anthropogenic rock exposures yields acid rock drainage with pH typically between 2 and 4, and locally down to pH 1. Soils and weathered rocks developed on basement graywacke have negligible acid neutralization capacity. Natural rainforest soils have pH between 4 and 5 on unmineralized graywacke, and pH is as low as 3.5 in soils on mineralized rocks. Roads with aggregate made from mineralized rocks have pH near 3, and quarries from which the rock was extracted can have pH down to 1. Mineralized rocks are enriched in arsenic and mercury, both of which are environmentally available as solid solution impurities in iron sulfides and phosphate minerals. Base metals (Cu, Pb, Zn) are present at low levels in soils, at or below typical basement rock background. Decomposition of the iron sulfides releases the solid solution arsenic and mercury into the acid rock drainage solns. Phosphate minerals release their impurities only under strongly acid conditions (pH < 1). Arsenic and mercury are adsorbed on to iron oxyhydroxides in soils, concentrated in the C horizon, with up to 4000 ppm arsenic and 100 ppm mercury. Waters emanating from acid rock drainage areas have arsenic and mercury below drinking water limits. Leaching expts. and theor. predictions indicate that both arsenic and mercury are least mobile in acid soils, at pH of c. 3-4. This optimum pH range for fixation of arsenic and mercury on iron oxyhydroxides in soils is similar to natural pH at the field site of this study. However, neutralization of acid soils developed on mineralized rocks is likely to decrease adsorption and enhance mobility of arsenic and mercury. Hence, development of farmland by clearing forest and adding agricultural lime may mobilize arsenic and mercury from underlying soils on mineralized rocks. In addition, arsenic and mercury release into runoff water will be enhanced where sediment is washed off mineralized road aggregate (pH 3) on to farm land (pH>6). The naturally acid forest soils, or even lower pH of natural acid rock drainage, are the most desirable environmental conditions to restrict dissoln. of arsenic and mercury from soils. This approach is only valid where mineralized soils have low base metal concns.

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 7 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:352465 HCAPLUS Full-text
DOCUMENT NUMBER: 143:62879
TITLE: Chemical weathering in the Krishna Basin and western Ghats of the Deccan Traps, India: rates of basalt weathering and their controls
AUTHOR(S): Das, A.; Krishnaswami, S.; Sarin, M. M.; Pande, K.
CORPORATE SOURCE: Planetary and Geosciences Division, Physical Research Laboratory, Ahmedabad, 380 009, India
SOURCE: Geochimica et Cosmochimica Acta (2005), 69(8), 2067-2084

CODEN: GCACAK; ISSN: 0016-7037
PUBLISHER: Elsevier Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Rates of chemical and silicate weathering of the Deccan Trap (India) basalts have been determined through major ion measurements in the headwaters of the Krishna and the Bhima rivers, their tributaries, and the west flowing streams of the western Ghats, all of which flow almost entirely through the Deccan basalts. Samples (n = 63) for this study were collected from 23 rivers during two consecutive monsoon seasons of 2001 and 2002. The amount of total dissolved solid (TDS) in the samples range from 27 to 640 mg/L. The rivers draining the western Ghats that flow through patches of cation-deficient lateritic soils have lower TDS (average: 74 mg/L), whereas the Bhima (except at origin) and its tributaries that seem to receive Na, Cl, and SO4 from saline soils and anthropogenic inputs have values in excess of 170 mg/L. Many of the rivers sampled are supersatd. with respect to calcite. The chemical weathering rates (CWR) of "selected" basins, which exclude rivers supersatd. in calcite and which have high Cl and SO4, are in range of .apprx.3 to .apprx.60 t km-2 yr-1. This yields an area-weighted average CWR of .apprx.16 t km-2 yr-1 for the Deccan Traps. This is a factor of .apprx.2 lower than that reported for the Narmada-Tapti-Wainganga (NTW) systems draining the more northern regions of the Deccan. The difference can be because of (1) natural variations in CWR among the different basins of the Deccan, (2) "selection" of river basin for CWR calcn. in this study, and (3) possible contribution of major ions from sources, in addition to basalts, to rivers of the northern Deccan Traps. Silicate weathering rates (SWR) in the selected basins calculated using dissolved Mg as an index varies between .apprx.3 to .apprx.60 t km-2 yr-1, nearly identical to their CWR. The Ca/Mg and Na/Mg in these rivers, after correcting for rain input, are quite similar to those in average basalts of the region, suggesting near congruent release of Ca, Mg, and Na from basalts to rivers. Comparison of calculated and measured silicate-Ca in these rivers indicates that at most .apprx.30% of Ca can be of non-silicate origin, a likely source being carbonates in basalts and sediments. The chemical and silicate weathering rates of the west flowing rivers of the Deccan are .apprx.4 times higher than the east flowing rivers. This difference is due to the correspondingly higher rainfall and runoff in the western region and thus reemphasizes the dominant role of runoff in regulating weathering rates. The silicon weathering rate (SWR) in the Krishna Basin is .apprx. 15 t km-2 yr-1, within a factor of .apprx.2 to those in the Yamuna, Bhagirathi, and Alaknanda basins of the Himalayas, suggesting that under favorable conditions (intense phys. weathering, high runoff) granites and the other silicates in the Himalaya weather at rates similar to those of Deccan basalts. The CO2 consumption rate for the Deccan is deduced to be .apprx.3.6 + 105 moles km-2 yr-1 based on the SWR. The rate, though, is two to three times lower than reported for the NTW rivers system; it still reinforces the earlier findings that, in general, basalts weather more rapidly than other silicates and that they significantly influence the atmospheric CO2 budget on long-term scales.

REFERENCE COUNT: 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 8 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:885642 HCAPLUS Full-text
DOCUMENT NUMBER: 141:368623
TITLE: Geochemistry of elements and parent materials of non-alluvial soils from Tokai and Okinawa districts, Japan
AUTHOR(S): Terashima, Shigeru; Ohta, Atsuyuki; Okai, Takashi; Imai, Noboru; Ujiie, Masumi Mikoshiba

CORPORATE SOURCE: Inst. Geosci., Geol. Survey Japan, AIST, Tsukuba, 305-8567, Japan
SOURCE: Chikyu Kagaku (Chigaku Dantai Kenkyukai) (2004), 58(5), 317-336
CODEN: CKKAA8; ISSN: 0366-6611
PUBLISHER: Chigaku Dantai Kenkyukai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

AB We have studied the geochem. behavior of multi elements during weathering and formation of soil to reveal the origin of non-alluvial soils collected in the Tokai and Okinawa districts. Some constituents such as total organic carbon, total sulfur, Sb, Bi, Pb, Cd, Sn, and Hg are often enriched in the uppermost soil layers. Their enrichments are not explained by simply chemical weathering process and pollution. Certain plants enrich in heavy metals, suggesting that biol. accumulation plays an important role for the chemical composition of soils . If the long-range transported aeolian dust is the main source of studied soils, the soil samples would have the homogeneous chemical composition However, the chemical composition of soil is similar to those of igneous rocks, sedimentary rocks and sediments, which are exposed to the each sampling localities. The aeolian dust does not particularly contribute to the soil formation. The reworked clastic materials, sea salts, plant and eolian dust are in short supply to explain the accumulation rate of soil layers. Anal. results of water-extracted elements from the powdered rocks and sediments show that all elements are removed as dissolved and suspended forms during soil forming process. The inconsistency of accumulation rate of soil layers and supply rate of source materials is probably due to the removal of surface materials.

L14 ANSWER 9 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:785602 HCAPLUS Full-text
DOCUMENT NUMBER: 139:380918
TITLE: Sr isotope evidence for population movement within the Hebridean Norse community of NW Scotland
AUTHOR(S): Montgomery, Janet; Evans, Jane A.; Neighbour, Tim
CORPORATE SOURCE: Department of Archaeological Sciences, University of Bradford, Bradford, BD7 1DP, UK
SOURCE: Journal of the Geological Society (London, United Kingdom) (2003), 160(5), 649-653
CODEN: JGSLAS; ISSN: 0016-7649
PUBLISHER: Geological Society Publishing House
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The excavation at Cnip, Isle of Lewis, Scotland, one of the largest, and only known family cemetery from the early Norse period in the Hebrides, provided a unique opportunity to use Sr isotope anal. to examine the origins of people who may have been Norwegian Vikings. Sr isotope anal. permits direct investigation of a person's place of origin rather than indirectly through acquired cultural and artifactual affiliations. Sr isotope data suggest that the Norse group at Cnip was of mixed origins. The majority were consistent with indigenous origins but two individuals, of middle-age and different sex, were immigrants. They were, however, not from Norway but were raised sep., most probably on Tertiary volcanic rocks or, for the female, on marine carbonate rocks.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 10 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:658369 HCAPLUS Full-text

DOCUMENT NUMBER: 139:310217
TITLE: Worldwide distribution of continental rock lithology: Implications for the atmospheric/soil CO2 uptake by continental weathering and alkalinity river transport to the oceans
AUTHOR(S): Suchet, Philippe Amiotte; Probst, Jean-Luc; Ludwig, Wolfgang
CORPORATE SOURCE: Microbiologie et Geochimie des Sols, UMR-INRA/Universite de Bourgogne, Centre des Sciences de la Terre, Dijon, Fr.
SOURCE: Global Biogeochemical Cycles (2003), 17(2), 7/1-7/13, 1 plate on p. d
CODEN: GBCYEP; ISSN: 0886-6236
PUBLISHER: American Geophysical Union
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The silicate rock weathering followed by the formation of carbonate rocks in the ocean, transfers CO2 from the atmospheric to the lithosphere. This CO2 uptake plays a major role in the regulation of atmospheric CO2 concns. at the geol. timescale and is mainly controlled by the chemical properties of rocks. This led to the construction of a world lithol. map with a grid resolution of 1° + 1°. This paper analyzes the spatial distribution of the six main rock types by latitude, continents, and ocean drainage basins and for 49 large river basins. Coupling a digital map with the GEM-CO2 model, the amount of atmospheric/ soil CO2 consumed by rock weathering and alkalinity river transport to the ocean was calculated Among all silicate rocks, shales and basalts appear to have a significant influence on the amount of CO2 uptake by chemical weathering.

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 11 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:531321 HCAPLUS Full-text
DOCUMENT NUMBER: 139:217014
TITLE: The Shaimerden supergene zinc deposit, Kazakhstan: A preliminary examination
AUTHOR(S): Boland, M. B.; Kelly, J. G.; Schaffalitzky, C.
CORPORATE SOURCE: Ennex International plc, Dublin, Ire.
SOURCE: Economic Geology (2003), 98(4), 787-795
CODEN: EGCEA8
PUBLISHER: Society of Economic Geologists, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The Shaimerden supergene zinc deposit in the southern Urals Mountains is located in the province of Kostanai in northwest Kazakhstan. It lies at the southern end of the Kostanai megasyncline, a north-northeast-trending, structurally controlled area of lower Paleozoic clastic and carbonate sedimentary rocks and volcanic rocks. A zinc-lead resource estimated at 4,645,100 tons at 21.06 percent Zn has been defined. The deposit is hosted within a sequence of intertidal to open-marine carbonates and evaporites of Visean (Early Carboniferous) age. Although drilling to date has not intersected a fault, significant faulting in the area is suggested by the presence of polymict debris flows comprising a wide range of carbonate facies and by large variations in micropaleontol. dates. Sulfide deposits replaced hydrothermally dolomitized carbonates and were subsequently reworked into polymict conglomerates of probable Carboniferous age that were deposited in a marine environment. Weathering of the sulfide mineral deposits took place during the Triassic Period, following uplift during the late Paleozoic. The weathering occurred in situ, and small intervals of relict sulfides were

preserved in the center of the deposit. The degree of weathering increases outward from the center of the deposit, which passes from massive sulfide to massive hemimorphite-smithsonite to weathered clays with hemimorphite-smithsonite fragments. The supergene minerals are overlain by bauxitic clays of Cretaceous age and Quaternary silty soils and sands.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 12 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:361983 HCAPLUS Full-text
DOCUMENT NUMBER: 139:167093
TITLE: Tracing the source of sediment and phosphorus into the Great Barrier Reef lagoon
AUTHOR(S): McCulloch, Malcolm; Pailles, Christine; Moody, Philip; Martin, Candace E.
CORPORATE SOURCE: Research School of Earth Sciences, Australian National University, Canberra, 0200, Australia
SOURCE: Earth and Planetary Science Letters (2003), 210(1-2), 249-258
CODEN: EPSLA2; ISSN: 0012-821X
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Neodymium and strontium isotopic systematics show that terrestrial phosphorus (P) entering the inner Great Barrier Reef (GBR) is dominated by the transport and dispersal of fine-grained basaltic soils. Soils derived from alkali basalts have high total P (3000-4000 mg/kg) and distinctive 143Nd/144Nd isotopic signatures (εNd.apprx.+3 to +5), while the more common Paleozoic granitic/metamorphic soils have much lower total P (300-600 mg/kg) and 143Nd isotopic signatures (εNd.apprx.-8). The nearshore environment (<5 km from the coast) is dominated by coarse-grained, granitic-derived fluvial detritus, while >20 km from the coast, carbonate-rich sediments with increasing contributions from basaltic components become more important. In the offshore sites adjacent to coral reefs, it is shown that basalt-derived sediments can account for >90% of the terrestrial P, although making up less than half of the total terrigenous detritus. Equilibrium phosphorus concentration measurements on the marine sediments indicate that P enters the GBR lagoon via a two-stage process. Firstly, during episodic flood events, P is transported into the GBR lagoon on P-retentive fine-grained suspended sediments, with only minor desorption of P occurring in the low-salinity flood plumes. Desorption of P mainly occurs over longer timescales, predominantly in regions of sediment anoxia, with release of PO43- directly into marine pore waters probably via reduction of ferric phosphates, and subsequent release into the water column by re-suspension. This process causes P depletion of the re-deposited sediments.

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 13 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:150923 HCAPLUS Full-text
DOCUMENT NUMBER: 138:324193
TITLE: Native copper from Permian-Triassic effusives of Udzha Uplift
AUTHOR(S): Tolstov, A. V.; Tomshin, M. D.
CORPORATE SOURCE: Yakutsk. Nauchno-Issled. Geologorazved. Predpriyatie TsNIGRI, AK "ALROSA", Mirnyi, 678170, Russia
SOURCE: Zapiski Vserossiiskogo Mineralogicheskogo Obshchestva (2002), 131(6), 57-60
CODEN: ZVMOEK; ISSN: 0869-6055

PUBLISHER: Nauka
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB An occurrence of native copper was found in the northeastern part of the Siberian Platform. The copper occurs in association with calcite and zeolite in carbonate veins piercing altered basic effusive rocks in thin (0.5 m) beds at a depth of 40-80 m. The upper horizons of the effusive rocks (tufflavas) have been brecciated under the influence of dolerite sills and then subjected to hydrothermal alteration. As a result, copper contained in the effusive rocks (1%) was extracted from them and redeposited together with calcite in vein formations. The newly formed copper occurs as films, plates, hooked and wire-like dendrites, well-bound crystals, and nuggets. Trace element contents are given of the dolerites, tufflavas, and other rocks of the area.

L14 ANSWER 14 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:878666 HCAPLUS Full-text
DOCUMENT NUMBER: 138:109815
TITLE: New data on the geology, mineral resources and geo-ecology of Franz-Josef Land Archipelago
AUTHOR(S): Makar'ev, A. A.; Makar'eva, E. M.; Kosteva, N. N.
CORPORATE SOURCE: Russia
SOURCE: Razvedka i Okhrana Nedr (2002), (9), 23-27
CODEN: RZONAV; ISSN: 0034-026X
PUBLISHER: Nedra
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB Geol., islands of the Franz-Josef Land Archipelago have a basement that includes folded Vendian rocks and Carboniferous coal-bearing clastic and carbonate rocks, and is overlain by Mesozoic sedimentary rocks of a platform cover. Trap formations are widespread: dikes, sills, and stocks of gabbro and gabbro-diorite; necks of microdolerites and hyalobasalts; basalt and andesitic- basalt lavas, and their tuffs and tuff-lavas. In chemical composition all of the igneous rocks belong to basic normal series with sodic and sodic-potassic alkalinity In comparison to the clarke values for basic igneous rocks, the average contents of Ga, Sn, Mo, V, Cu, Zn, Zr, and Ce are higher and those of Cr, Nb, Ag, Sr, and Sc are lower. The known mineral resources include bituminous coal, bituminous rocks, siallite, and stone of com. value. At storage sites of fuels and lubricants the soils are polluted by petroleum products. Also, soils and moss have 137Cs ≤ 352 and ≤ 350 Bq/kg, resp., and 60Co ≤ 60 and ≤ 115 Bq/kg, resp. In the waters adjacent to the archipelago the Quaternary sediments are no more than 3-5 m thick, and the bottom sediments are ecol. undisturbed.

L14 ANSWER 15 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:768929 HCAPLUS Full-text
DOCUMENT NUMBER: 138:6635
TITLE: Physicochemical factors in formation of the chemical composition of supergene zone waters
AUTHOR(S): Ryzhenko, B. N.; Krainov, S. R.
CORPORATE SOURCE: Inst. Geokhim. Anal. Khim. im. V. I. Veradskogo, RAN, Moscow, 119991, Russia
SOURCE: Geokhimiya (2002), (8), 864-891
CODEN: GEOKAQ; ISSN: 0016-7525
PUBLISHER: MAIK Nauka/Interperiodica Publishing
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB Compns. (major contents and minerals in which saturated) were calculated of the aqueous solns. forming from the interaction of 6 types of crustal rocks (ultrabasic, basic, granitoid, carbonate, silty-arenaceous, and argillaceous rocks) with water at 25°, 1 kbar, in systems closed for CO2 and O2. The authors mainly used the "Gibbs (HCh)" program complex (Shvarov, Yu. V., 1999) and determined the equilibrium state in the H-O-K-Ca-Mg-Fe-Mn-Al-Si-Ti-P-C-Cl-F-S system with 250 potential minerals and 200 simple and complex particles/ions in solution In addition to geol. (qual.) characteristics of natural processes acting on the chemical composition of continental natural waters (time of exchange, rock type, climatic conditions, etc.) physicochem. (quant.) factors were considered. Along with the previously established factors of the ratio of the reacting masses of rocks and waters (R/W), the degree to which the "rock-water" system is open or closed with respect to CO2 and O2, and the temp-pressure conditions, the degree of extraction of Cl from rocks, which dets. the mineral carriers of Cl in the rock, should be taken into account. The physicochem. factors fully and quant. describe the formation and change with time of the chemical composition of supergene zone waters.

L14 ANSWER 16 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:409503 HCAPLUS Full-text
DOCUMENT NUMBER: 135:275562
TITLE: Paleoproterozoic basin development and sedimentation in the Lake Superior region, North America
AUTHOR(S): Ojakangas, R. W.; Morey, G. B.; Southwick, D. L.
CORPORATE SOURCE: Department of Geological Sciences, University of Minnesota Duluth, Duluth, MN, 55812, USA
SOURCE: Sedimentary Geology (2001), 141-142, 319-341
CODEN: SEGEBX; ISSN: 0037-0738
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The peneplaned Archean craton in the Lake Superior region was the platform upon which a continental margin assemblage was deposited. Extension resulted in localized rifts that received thicker accumulations of sediments and volcanic rocks than did adjacent parts of the platform. Seas transgressed onto the continent several times and an ocean basin opened south of the present-day Lake Superior. Island arcs that formed during subduction collided with the craton margin as the ocean basin closed; oceanic crust is poorly preserved as a dismembered ophiolite sequence. The arc volcanic rocks are preserved as the Wisconsin magmatic terranes. The collision resulted in a fold-and-thrust belt known as the Penokean orogen. To the north of the fold-and-thrust belt, a northward-migrating foreland basin (the Animikie basin) developed. Thick turbidite successions were deposited along the basin axis, and terrigenous clastics and Lake Superior-type iron-formation were deposited on the shelf along the northern margin of the basin.The primary paleoclimatic indicators are: (1) glaciogenic rocks at the base of the Paleoproterozoic succession in Michigan indicating ice-house conditions; (2) remnants of a paleosol on the glaciogenic rocks indicative of deep weathering, probably under subtropical conditions and therefore of greenhouse conditions; and (3) carbonate minerals after gypsum, halite, and anhydrite in stromatolitic dolomite, indicative of aridity. Three second-order depositional sequences are bounded by major unconformities, and can be correlated throughout the Lake Superior region.

REFERENCE COUNT: 121 THERE ARE 121 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 17 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:409501 HCAPLUS Full-text
DOCUMENT NUMBER: 135:275560
TITLE: Basin evolution of the Paleoproterozoic Karelian Supergroup of the Fennoscandian (Baltic) Shield
AUTHOR(S): Ojakangas, R. W.; Marmo, J. S.; Heiskanen, K. I.
CORPORATE SOURCE: Department of Geological Sciences, University of Minnesota Duluth, Duluth, MN, 55812, USA
SOURCE: Sedimentary Geology (2001), 141-142, 255-285
CODEN: SEGEBX; ISSN: 0037-0738
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The peneplaned Archean craton of the Fennoscandian Shield served as a platform upon which a continental margin assemblage, the Karelian Supergroup, was deposited between .apprx.2.45 and .apprx.1.9 Gyr ago. Major subaerial unconformities sep. five sedimentary-volcanic groups of the supergroup (the Sumian, Sariolian, Jatulian (Lower and Upper), Ludicovian, and Kalevian). Second-order depositional sequences are implied. Early extension (.apprx.2.45 Ga) resulted in localized rifts that were likely areas of later subsidence as well; they received thicker accumulations of sediments and volcanic rocks than did the adjacent platform. It is in these rifts and perhaps other downwarped areas that the sediments that were once more widespread were preserved, leading to interpretations of sep. depositional basins by some workers. Seas transgressed onto the craton at least three times - in Sariolian time as evidenced by interpreted glacial-marine deposits, in Jatulian time as evidenced by widespread orthoquartzites (including tidalites) and stromatolitic carbonates, and in Ludicovian time as evidenced by organic-rich shales and turbidites. The tectonic-magmatic history is complex. Three episodes of mafic volcanism were widespread at 2.45, 2.2, and 2.1 Ga. Island arcs formed to the south of the craton and collided at .apprx.1.9-1.85 Ga (the Svecofennian orogeny). This collision resulted in northeastward thrusting (e.g. the Outokumpu nappe) and folding and metamorphism of the Karelian Supergroup. The primary paleoclimatic indicators are (1) glaciogenic rocks near the base of the Paleoproterozoic succession indicating ice-house conditions; (2) remnants of a major paleosol on the glaciogenic rocks, indicative of deep weathering under greenhouse conditions (subtropical or tropical); and (3) carbonate pseudomorphs after evaporite minerals in stromatolitic dolomites , perhaps indicative of aridity. Similarities in magmatism, tectonics, sedimentary rock types and sequences, and paleoclimatic indicators have led to hypotheses that the Fennoscandian Shield and North America may have been part of the same supercontinent during Neoarchean and Paleoproterozoic time.

REFERENCE COUNT: 196 THERE ARE 196 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 18 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:273038 HCAPLUS Full-text
DOCUMENT NUMBER: 133:46410
TITLE: Geochemical reference samples
AUTHOR(S): Imai, Noboru
CORPORATE SOURCE: Geochemistry Department, The Geochemical Survey of Japan, Ibaraki-ken, Tsukuba-shi, Higashi, 305-8567, Japan
SOURCE: Chikyu Kagaku (Nippon Chikyu Kagakkai) (2000), 34(1), 1-9
CODEN: CKNKDM; ISSN: 0386-4073
PUBLISHER: Nippon Chikyu Kagakkai

DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB A list is given of producers certifying geochem. reference samples, including GSJ, IGEM, USGS, RIAP, MINTEK and NIST. Lists are given of rock, mineral and ore reference samples presented by the producers. Chemical compns. with recommended or preferred values are given for representative reference samples by GSJ, USGS, CCRMP and IGGE. A list is given of Internet URLs concerning geochem. reference samples.

L14 ANSWER 19 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:186607 HCAPLUS Full-text
DOCUMENT NUMBER: 132:323972
TITLE: Weathering of rocks induced by lichen colonization - a review
AUTHOR(S): Chen, J.; Blume, H.-P.; Beyer, L.
CORPORATE SOURCE: East Beijing Road 71, Institute of Soil Science, Chinese Academy of Sciences, Nanjing, Peop. Rep. China
SOURCE: Catena (2000), 39(2), 121-146
CODEN: CIJPD3; ISSN: 0341-8162
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 113 refs. The evidence presented by numerous investigations of the interface between lichens and their rock substrates strongly suggests that the weathering of minerals can be accelerated by the growth of at least some lichen species. The effects of lichens on their mineral substrates can be attributed to both phys. and chemical processes. The phys. effects are reflected by the mech. disruption of rocks caused by hyphal penetration, expansion and contraction of lichen thallus, swelling action of the organic and inorg. salts originating from lichen activity. Lichens also have significant impact in the chemical weathering of rocks by the excretion of various organic acids, particularly oxalic acid, which can effectively dissolve minerals and chelate metallic cations. As a result of the weathering induced by lichens, many rock-forming minerals exhibit extensive surface corrosion. The precipitation of poorly ordered iron oxides and amorphous alumino-silica gels, the neoformation of crystalline metal oxalates and secondary clay minerals have been frequently identified in a variety of rocks colonized by lichens in nature. For a better understanding of the impacts of lichens on environments, further work on the comprehensive involvement of the lichen effects on weathering of natural rocks, deterioration of building stones and stonework, and formation of primitive soils should be carried out.
REFERENCE COUNT: 113 THERE ARE 113 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 20 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:457403 HCAPLUS Full-text
DOCUMENT NUMBER: 129:89610
ORIGINAL REFERENCE NO.: 129:18290h,18291a
TITLE: Alkali fusion/ICP-AES for the determination of boron in geological reference materials and a comparison with spectrophotometry
AUTHOR(S): Terashima, Shigeru; Okai, Takashi; Taniguchi, Masahiro
CORPORATE SOURCE: Geol. Surv. Japan, Tsukuba, 305-0046, Japan
SOURCE: Bunseki Kagaku (1998), 47(7), 451-454
CODEN: BNSKAK; ISSN: 0525-1931
PUBLISHER: Nippon Bunseki Kagakkai
DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB For the determination of B in geol. materials, spectrophotometry with the extraction of methylene blue fluoroborate by dichloroethane is more sensitive than ICP-AES. However, the interference of diverse elements in spectrophotometry is considerably more serious than that in ICP-AES, and the anal. procedures are much more complicated. Although the sample digestion-method with an acid mixture of H_2SO_4-HF can be safely adopted to common igneous rocks, some sediments and sedimentary rocks are not completely decomposed A 0.1 g sample was fused with 0.5 g of Na carbonate, and the melt was dissolved in 6 M HCl; then, B was directly determined at the 249.678 nm emission line by ICP-AES. A determination limit of 4 μg/g of B was achieved with a precision of less than 7%. The present method has been successfully applied to the anal. of 28 international geol. reference materials.

L14 ANSWER 21 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:737380 HCAPLUS Full-text
DOCUMENT NUMBER: 126:106645
ORIGINAL REFERENCE NO.: 126:20555a,20558a
TITLE: Application of multi-element geochemistry in Au-phosphate-bearing lateritic crusts for identification of their parent rocks
AUTHOR(S): Lima da Costa, Marcondes; Santos Araujo, Eric
CORPORATE SOURCE: Center for Geosciences, Federal University of Para, C.P. 1611, 66075-110, Belem, Brazil
SOURCE: Journal of Geochemical Exploration (1996), 57(1-3), 257-272
CODEN: JGCEAT; ISSN: 0375-6742
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Serra do Pirocaua is a plateau formed on mature lateritic rocks (Eocene), partially covered by earthy soil. Gold in the region around the serra (plateau) has been mined from the 17th Century to the present. Laterites extend not only over the entire plateau, but also in the neighboring flat and low-lying area. Outcrops of fresh rocks are rare and none has been found as yet on the plateau. Systematic geochem. and mineralogical studies were carried out on samples taken from crusts and surface soils of the plateau. Initial results show that these materials are practically identical both in terms of mineralogy as well as geochem. indicating that the soils have a phys. origin, i.e., they are immature. Multi-element geochem. data have identified three main geochem. signatures both for the crusts as well as the soils, representative of three mineral groups: hematite + goethite, Al phosphates and anatase. A lithol. map of the substrata was developed, based on the distribution of the anomalous levels of elements in each association The data suggest that the substrata are formed of volcano-sedimentary rocks of mafic to intermediate composition and probably phosphorite beds. Both the volcanic and non-volcanic mafic-ultramafic rocks may be present. Hydrothermal manifestations such as As-bearing tourmaline-quartz veins were suspected because of high levels of As and Au as well as dravite aggregates in Fe crusts and soils.

REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 22 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:105997 HCAPLUS Full-text
DOCUMENT NUMBER: 124:207435
ORIGINAL REFERENCE NO.: 124:38229a,38232a
TITLE: Comparison of the origin and evolution of Northwest

Pacific guyots drilled during LEG 144
AUTHOR(S): Haggerty, Janet A.; Silva, Isabella Premoli
CORPORATE SOURCE: Dep. Geosciences, Univ. Tulsa, Tulsa, OK, 74104, USA
SOURCE: Proceedings of the Ocean Drilling Program: Scientific Results (1995), 144, 935-49
CODEN: POSRE2; ISSN: 0884-5891
PUBLISHER: Ocean Drilling Program
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Five northwest Pacific guyots were drilled during Leg 144, ODP. Drilling results indicate that carbonate platforms grew atop volcanic edifices produced by two pulses of volcanism associated with hotspots. The first pulse of volcanism, during Barremian-Albian time, constructed the MIT and Takuyo-Daisan edifices and the pedestals of Lo-En and Wodejebato guyots, and was widespread at abyssal locations. A second pulse of volcanism, mainly across the Santonian/Campanian boundary, created emergent islands in the northern Marshall Islands and Line Islands. Eruptions during the younger portion of this second episode formed some of the southern Marshall Islands chain, including Limalok Guyot. Independent of their age of formation, most of the volcanic islands developed weathering profiles (including soils) and forests. Two to seven million years after an island formed, its edifice was flooded and a carbonate platform began. These carbonate platforms responded to a complex function of sea-level fluctuations and environmental changes. Shallow-water sedimentation on Leg 144 platforms terminated either in Albian, Late Maastrichtian, or Middle Eocene time. Their termination was not a simple mid-Cretaceous drowning event. When the northward motion of the Pacific Plate brought the platforms into the zone of equatorial upwelling, this apparently inhibited carbonate production, enhanced bio-erosion, and the platforms died. Modern Pacific atolls are an inadequate analog for these ancient Pacific platforms. The Cretaceous and Eocene carbonate platforms resembled modern carbonate banks, rather than modern atolls that have a coral-algal reef framework surrounding a lagoon. These Cretaceous and Eocene platforms produced vast quantities of loose carbonate sediment in large shoal deposits. Cretaceous rudist-algal-coral boundstones formed relatively thin bioherms associated with shoals; this association built peri-platform ridges near the summit margins.

L14 ANSWER 23 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:894042 HCAPLUS Full-text
DOCUMENT NUMBER: 123:312860
ORIGINAL REFERENCE NO.: 123:56071a,56074a
TITLE: Chemistry, clay activity and mineralogy of soils along three toposequences over igneous and sedimentary lithologies in southeastern Nigeria
AUTHOR(S): Eshett, E.T.
CORPORATE SOURCE: School of Agriculture and Agricultural Technology, Federal University of Technology, Owerri, 1526, Nigeria
SOURCE: Cell Biology International (1995), 19(8), 271-85
CODEN: CBIIEV; ISSN: 1065-6995
PUBLISHER: Academic
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Soils of 3 toposequences in Northern Cross River State of Nigeria, derived variously from granite, sandstone, shale, and basalt, were examined and characterized in terms of morphol.-physicochem. properties, clay activity, and minerals present in the clay fraction. An attempt was made to investigate and establish any possible links or relationships between the drainage condition,

the dominant clay mineralogy and the other inherent soil chemical characteristics which could help in the proper management of these soils. The well-drained upland pedons (coarse, loamy, mixed, isohyperthermic Typic Paleudults) had low pH values, low effective cation exchange capacity, and low clay activity. These characteristics were attributed to the good drainage condition and the associated mineral assemblage which consisted of kaolinite (predominant) and some hydrous oxide clays (goethite and gibbsite). Mineral hydromorphic soils , occurring in valley bottom sites, contained smectite which accounted for higher effective cation exchange capacity and clay activity. Poor to imperfect drainage condition prevailing in the latter, coupled with higher pH and higher base supplies, favored in situ synthesis of smectite and conveyed generally higher agricultural potentials on the hydromorphic soils.

L14 ANSWER 24 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1987:462287 HCAPLUS Full-text
DOCUMENT NUMBER: 107:62287
ORIGINAL REFERENCE NO.: 107:10289a,10292a
TITLE: Global chemical weathering of surficial rocks estimated from river dissolved loads
AUTHOR(S): Meybeck, Michel
CORPORATE SOURCE: Inst. Biogeochim. Mar., Ec. Norm. Super., Montrouge, 92120, Fr.
SOURCE: American Journal of Science (1987), 287(5), 401-28
CODEN: AJSCAP; ISSN: 0002-9599
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Calcns. based on the surface-water chemical characteristic of the major bed rock types and on the relative proportions of these bedrock types exposed in outcrops at the surface of the continents yield a theor. average composition of river waters close to the actual measured value. Although crystalline rocks form .apprx.33.9% of the continental rock outcrops, the global weathering of crystalline rocks accounts for only 11.6% of solutes in river waters. Evaporites from .apprx.1.25% of total outcrops but may contribute 17.2% of the dissolved river load originating from chemical denudation. Carbonate minerals found in sedimentary rocks are responsible for 50% of the total load derived from denudation. Bicarboantes solutes are mostly derived (67%) from soil and atmospheric CO2 involved in chemical denudation reactions. Solute cations released by the weathering of silicate minerals are Ca 45, Mg 20, Na 20, and K 15% (all proportions calculated from loads in grams). The calculated chemical erosion rates (mass of SiO2 and major ions exported per unit area per unit time) relative to granite weathering are: granite 1.0, gneiss and mica schist 1.0, gabbro 1.3, sandstone 1.3, volcanic rocks 1.5 shale 2.5 serpentinite and amphibolite 5, carbonate rocks 12, gypsum 40 and rock salt 80.

L14 ANSWER 25 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1986:141339 HCAPLUS Full-text
DOCUMENT NUMBER: 104:141339
ORIGINAL REFERENCE NO.: 104:22153a,22156a
TITLE: The application of proton-induced gamma-ray emission (PIGE) analysis to the rapid determination of fluorine in geological materials
AUTHOR(S): Roelandts, I.; Robaye, G.; Weber, G.; Delbrouck-Habaru, J. M.
CORPORATE SOURCE: Dep. Geol., Petrol. Geochem., Univ. Liege, Liege, B-4000/1, Belg.

SOURCE: Chemical Geology (1986), 54(1-2), 35-42
CODEN: CHGEAD; ISSN: 0009-2541
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A direct nondestructive proton-induced γ-ray emission (PIGE) technique for the determination of F in a wide variety of geol. materials is presented. The method is based on the nuclear reaction 19F(p,αγ)16O. The pressed powder pellets of geol. samples are irradiated by means of a 3-MeV Van de Graaff accelerator as a source of protons. Under our operating conditions, the detection limit is around 25 ppm. Precision and accuracy of the results are discussed. The merits of the PIGE method are compared with those of other anal. methods.

L14 ANSWER 26 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1982:566588 HCAPLUS Full-text
DOCUMENT NUMBER: 97:166588
ORIGINAL REFERENCE NO.: 97:27745a,27748a
TITLE: Uranium-thorium dating of Quaternary carbonate accumulations in the Nevada Test Site region, southern Nevada [USA]
AUTHOR(S): Szabo, B. J.; Carr, W. J.; Gottschall, W. C.
CORPORATE SOURCE: Geol. Surv., Denver, CO, USA
SOURCE: Report (1981), USGS-OFR-81-119, 38 pp. Avail.: INIS; NTIS
From: INIS Atomindex 1982, 13(11), Abstr. No. 674631
DOCUMENT TYPE: Report
LANGUAGE: English

AB Some of the samples from closed systems yielded reasonable ages; others gave only a min. age for a material or event. Many of the ages obtained agree well with ests. of age determined from dated volcanic units, fault-scarp morphol., and displaced alluvial units. Among the significant ages obtained were 3 dates of >400,000 yr on calcite-filling fractures above and below the water table in an exploratory drill hole for a possible candidate nuclear waste repository site at Yucca Mountain. Another date on calcrete from immediately below the youngest basalt in the region gave an age of 345,000 yr, which agrees extremely well with the K-Ar age determined for the basalt (.apprx.300,000 yr). Undisturbed travertine that fills faults in several areas gave ages from .apprx.75,000 to >700,000 yr. Soil caliche and calcretes slightly displaced or broken by repeated movement on faults gave min. ages in the range from >5000 to .gtorsim.25,000 yr.

L14 ANSWER 27 OF 27 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1969:60671 HCAPLUS Full-text
DOCUMENT NUMBER: 70:60671
ORIGINAL REFERENCE NO.: 70:11419a,11422a
TITLE: Chemical composition of surface and ground waters of the Noril'sk region
AUTHOR(S): Kuz'min, E. E.; Posokhov, E. V.
CORPORATE SOURCE: Noril'sk. Geol. Eksp., Norilsk, USSR
SOURCE: Gidrokhimicheskie Materialy (1968), 47, 63-76
CODEN: GKMAAS; ISSN: 0367-4665
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB The Norilsk area in the northwestern Siberia has 2 major rivers, Norilka and Pyasina, with many mountain tributaries and numerous lakes fed mainly with flood and rain water. Precipitation is 300-780 mm./year. The geol. composition includes limestone, dolomite, clay, argillite , aleurolite,

gypsum, anhydrite, sandstone, and basalt. The lakes belong to the Mg-Ca-HCO3 type, less to Ca-HCO3 and Na-HCO3 types with mineralization of 70-160 mg./l. The Lake Chibichete belongs to the Na-Cl type with increased Mg concentration and the Lake Kyllakh-Kyuel to the Ca-Na-SO4 type. The rivers have mostly Na-HCO3 type, less Ca-HCO3 or mixed type, their mineralization is 50-200 mg./l. with the exception of Kupets and Omnutakh which reach 340 mg./l.; the former falls into the Na-SO4 group. The ground waters exist above the frozen ground from June to October and belong to the Ca-HCO3 type or HCO3- with mixed cations Ca, Na, Mg; their mineralization is 133-424 mg./l. The ground water below the frozen ground in the Quaternary deposits has Ca-HCO3 or Na-Ca-HCO3 type and up to 260 mg./l. of salts. In the Norilsko-Rybinskaya Valley, the Na-SO4, CaSO4, or mixed type is found with up to 2.3 g. salts/l. The ground water in rock fissures of tuff and lava layers of Perm-Triass belong to the Na-HCO3, Ca-HCO3, or Ca-Na-SO4 type with up to 1.0 g. salts/l., in the Devonian deposits the Ca-SO4 or mixed type with Na and Mg with 6.0-12.5 g. salts/l. is found. The Silur carbonate deposits contain water of Ca-SO4, Na-SO4, and mixed type with 1.27-3.29 g. salts/l. In the Valek River Valley, the Na-Cl waters with 13.7-31.4 g. salts/l., up to 133 mg. Br/l., and up to 15 mg. H2S/l. are found at 100-260 m. depth. The Cambrian deposits have water of Ca-SO4 or Ca-Mg-SO4 type with 1.3-4.9 g. salts/l. The Na content of water is due to the cation exchange in soils. The Na-Cl water with up to 1 g. salts/l. is found in the limits of the Cu and Ni deposits of Talnakh and Norilsk and can serve as hydrochem. criterion for the Cu and Ni presence.

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FILE 'AEROSPACE, AQUALINE, CAPLUS, COMPENDEX, CONFSCI, DISSABS,
     ENCOMPLIT, ENCOMPPAT, ENERGY, ENVIROENG, GEOREF, IFIPAT, INSPEC, NTIS,
     OCEAN, PASCAL, SCISEARCH, TULSA, TULSA2, USPATFULL, USPAT2, WATER'

L1  (    337110)SEA BASALT OR TRAP(2A) ROCK OR ((EXTRUSIVE(2A) IGNEOUS OR
                VOLCANIC)(2A)(ROCK)) OR SOLIDIFIED(2A) LAVA
L2  (   1685506)SEA LIMESTONE OR CALCITE OR AGGREGATE OR ((CARBONATE OR
                SEDIMENTARY)(2A) (ROCK)) OR CALCIUM(2A) CARBONATE OR KEYSTONE
                OR COQUINA
L3  (    800853)SEA DOLOMITE OR DOLOSTONE OR ARCTIC(2A) FROST OR ANTIQUE(2A)
                WHITE OR AGGREGATE OR (CHEMICAL(2A) SEDIMENTARY OR CARBONATE)(2
                A) ROCK OR ((CALCIUM(2A) MAGNESIUM)(2A)(CARBONATE))
L4  (     32038)SEA CLAYSTONE OR CLAY(2A) STONE OR ARGILLITE
L5            3 SEA SOIL(2A)(ADDITIVE OR AMENDMENT OR IMPROV? OR LIMING OR
                CONDITION? OR STABALIZE? OR ACID? OR REMEDIAT?) AND (L1 AND L2
                AND L3 AND L4)


L5   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:        2005:415630  CAPLUS  Full-text
DOCUMENT NUMBER:         143:199184
TITLE:                   Potential anthropogenic mobilisation of mercury and
                         arsenic from soils on mineralized rocks, Northland,
                         New Zealand
AUTHOR(S):               Craw, D.
CORPORATE SOURCE:        Geology Department and Environmental Science
                         Programme, University of Otago, Dunedin, N. Z.
SOURCE:                  Journal of Environmental Management (2005), 74(3),
                         283-292
                         CODEN: JEVMAW; ISSN: 0301-4797
PUBLISHER:               Elsevier B.V.
DOCUMENT TYPE:           Journal
```

LANGUAGE: English

AB Eroded roots of hot spring systems in Northland, New Zealand consist of mineralized rocks containing sulfide minerals. Marcasite and cinnabar are the dominant sulfides with subordinate pyrite. Deep weathering and leached soil formation has occurred in a warm temperate to subtropical climate with up to 3 m/yr rainfall. Decomposition of the iron sulfides in natural and anthropogenic rock exposures yields acid rock drainage with pH typically between 2 and 4, and locally down to pH 1. Soils and weathered rocks developed on basement graywacke have negligible acid neutralization capacity. Natural rainforest soils have pH between 4 and 5 on unmineralized graywacke, and pH is as low as 3.5 in soils on mineralized rocks. Roads with aggregate made from mineralized rocks have pH near 3, and quarries from which the rock was extracted can have pH down to 1. Mineralized rocks are enriched in arsenic and mercury, both of which are environmentally available as solid solution impurities in iron sulfides and phosphate minerals. Base metals (Cu, Pb, Zn) are present at low levels in soils, at or below typical basement rock background. Decomposition of the iron sulfides releases the solid solution arsenic and mercury into the acid rock drainage solns. Phosphate minerals release their impurities only under strongly acid conditions (pH < 1). Arsenic and mercury are adsorbed on to iron oxyhydroxides in soils, concentrated in the C horizon, with up to 4000 ppm arsenic and 100 ppm mercury. Waters emanating from acid rock drainage areas have arsenic and mercury below drinking water limits. Leaching expts. and theor. predictions indicate that both arsenic and mercury are least mobile in acid soils, at pH of c. 3-4. This optimum pH range for fixation of arsenic and mercury on iron oxyhydroxides in soils is similar to natural pH at the field site of this study. However, neutralization of acid soils developed on mineralized rocks is likely to decrease adsorption and enhance mobility of arsenic and mercury. Hence, development of farmland by clearing forest and adding agricultural lime may mobilize arsenic and mercury from underlying soils on mineralized rocks. In addition, arsenic and mercury release into runoff water will be enhanced where sediment is washed off mineralized road aggregate (pH 3) on to farm land (pH>6). The naturally acid forest soils, or even lower pH of natural acid rock drainage, are the most desirable environmental conditions to restrict dissoln. of arsenic and mercury from soils. This approach is only valid where mineralized soils have low base metal concns.

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:60612 CAPLUS Full-text
DOCUMENT NUMBER: 140:81058
TITLE: A soil additive management and remediation of acidic and acid sulfate soils
INVENTOR(S): Treers, Huw; Sheehy, Donna
PATENT ASSIGNEE(S): Australia
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004007638	A1	20040122	WO 2003-AU642	20030526

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,

GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,
TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2492569	A1	20040122	CA 2003-2492569		20030526
AU 2003229102	A1	20040202	AU 2003-229102		20030526
AU 2003229102	B2	20071025			
NZ 538060	A	20050527	NZ 2003-538060		20030526
BR 2003012856	A	20050614	BR 2003-12856		20030526
EP 1539903	A1	20050615	EP 2003-724631		20030526
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
CN 1671822	A	20050921	CN 2003-816475		20030526
CN 1277903	C	20061004			
ZA 2004010337	A	20051017	ZA 2004-10337		20041222
MX 2005PA00437	A	20050722	MX 2005-PA437		20050107
US 20060130397	A1	20060622	US 2005-519366		20051013
PRIORITY APPLN. INFO.:			AU 2002-950123	A	20020711
			WO 2003-AU642	W	20030526

AB A soil additive is produced from crushing, grinding and blending specified source rocks wherein a final product contains at least three of andesite, basalt, limestone, dolomite and claystone. The final product has a modal abundance of basalt in the range of 11-91, limestone 1-59, dolomite 0.025-30, and claystone 0-17.5%. The invention can be used in the following applications: (a) for the development, management and remediation of acidic and acid sulfate soils (ASS); (b) for remediation of alkaline soils, acidic materials and leachate; (c) for use in agricultural operations located on saline soils to enhance plant tolerance to saline conditions; (d) for use in agricultural practices located on ASS and acidic soils to enhance plant tolerance to saline conditions where tidal flushing practices are used to buffer drain acidity; (e) for the management and remediation of industrial waste; and (f) for general use as a partial or full replacement of traditional carbonate derived limestone and liming products to reduce greenhouse gas emissions.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 3 IFIPAT COPYRIGHT 2008 IFI on STN

AN 11181363 IFIPAT;IFIUDB;IFICDB Full-text
TITLE: Soil additive
INVENTOR(S): Huw; Treers, Stotts Island, New South Wales, AU
Sheehy; Donna, Stotts Island, New South Wales, AU
PATENT ASSIGNEE(S): Unassigned
AGENT: Smith Gambrell & Russell, 1850 M Street N W, Suite 800, Washington, DC, 20036, US

	NUMBER	PK	DATE	
PATENT INFORMATION:	US 20060130397	A1	20060622	
APPLICATION INFORMATION:	US 2003-519366		20030526	
	WO 2003-AU642		20030526	
			20051013	PCT 371 date
			20051013	PCT 102(e) date

NUMBER	DATE

PRIORITY APPLN. INFO.:	AU 2002-950123	20020711
FAMILY INFORMATION:	US 20060130397	20060622
DOCUMENT TYPE:	Utility Patent Application - First Publication	
FILE SEGMENT:	MECHANICAL APPLICATION	
ENTRY DATE:	Entered STN: 24 Jun 2006 Last Updated on STN: 24 Jun 2006	
NUMBER OF CLAIMS:	23 3 Figure(s).	

DESCRIPTION OF FIGURES:

FIG. 1 shows the process according to one preferred aspect of the invention.

FIG. 2 shows the process according to another preferred aspect of the invention.

FIG. 3 shows the process according to yet another preferred aspect of the invention.

AB A soil additive produced from crushing, grinding and blending specified source rocks wherein a final product contains at least three of andesite, basalt, limestone, dolomite and claystone.

CLMN 23 3 Figure(s).

FIG. 1 shows the process according to one preferred aspect of the invention.

FIG. 2 shows the process according to another preferred aspect of the invention.

FIG. 3 shows the process according to yet another preferred aspect of the invention.

AUTHOR SEARCH

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FILE 'AEROSPACE, AQUALINE, CAPLUS, COMPENDEX, CONFSCI, DISSABS,
     ENCOMPLIT, ENCOMPPAT, ENERGY, ENVIROENG, GEOREF, IFIPAT, INSPEC, NTIS,
     OCEAN, PASCAL, SCISEARCH, TULSA, TULSA2, USPATFULL, USPAT2, WATER'

L21           1 SEA TREERS HUW/AU
L22           3 SEA "HUW T J"/AU OR "HUW TREERS"/AU
L23           4 SEA L21 OR L22
L24         141 SEA ("SHEEHY D"/AU OR "SHEEHY D A"/AU OR "SHEEHY D E"/AU OR
                "SHEEHY D J"/AU OR "SHEEHY D L"/AU OR "SHEEHY D N"/AU OR
                "SHEEHY D P"/AU OR "SHEEHY D T"/AU) OR "SHEEHY DJ"/AU OR
                "SHEEHY DONNA"/AU
L25           3 SEA L23 AND L24


L25  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         2004:60612  CAPLUS  Full-text
DOCUMENT NUMBER:          140:81058
TITLE:                    A soil additive management and remediation of acidic
                          and acid sulfate soils
INVENTOR(S):              Treers, Huw; Sheehy, Donna
PATENT ASSIGNEE(S):       Australia
SOURCE:                   PCT Int. Appl., 36 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
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             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,
             TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     CA 2492569            A1    20040122    CA 2003-2492569          20030526
     AU 2003229102         A1    20040202    AU 2003-229102           20030526
     AU 2003229102         B2    20071025
     NZ 538060             A     20050527    NZ 2003-538060           20030526
     BR 2003012856         A     20050614    BR 2003-12856            20030526
     EP 1539903            A1    20050615    EP 2003-724631           20030526
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
     CN 1671822            A     20050921    CN 2003-816475           20030526
     CN 1277903            C     20061004
     ZA 2004010337         A     20051017    ZA 2004-10337            20041222
     MX 2005PA00437        A     20050722    MX 2005-PA437            20050107
     US 20060130397        A1    20060622    US 2005-519366           20051013
PRIORITY APPLN. INFO.:                       AU 2002-950123       A   20020711
                                             WO 2003-AU642        W   20030526
```

AB A soil additive is produced from crushing, grinding and blending specified source rocks wherein a final product contains at least three of andesite, basalt, limestone, dolomite and claystone. The final product has a modal abundance of basalt in the range of 11-91, limestone 1-59, dolomite 0.025-30, and claystone 0-17.5%. The invention can be used in the following applications: (a) for the development, management and remediation of acidic and acid sulfate soils (ASS); (b) for remediation of alkaline soils, acidic materials and leachate; (c) for use in agricultural operations located on saline soils to enhance plant tolerance to saline conditions; (d) for use in agricultural practices located on ASS and acidic soils to enhance plant tolerance to saline conditions where tidal flushing practices are used to buffer drain acidity; (e) for the management and remediation of industrial waste; and (f) for general use as a partial or full replacement of traditional carbonate derived limestone and liming products to reduce greenhouse gas emissions.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 2 OF 3 IFIPAT COPYRIGHT 2008 IFI on STN

AN 11181363 IFIPAT;IFIUDB;IFICDB Full-text

TITLE: Soil additive

INVENTOR(S): Huw; Treers, Stotts Island, New South Wales, AU
Sheehy; Donna, Stotts Island, New South Wales, AU

PATENT ASSIGNEE(S): Unassigned

AGENT: Smith Gambrell & Russell, 1850 M Street N W, Suite 800, Washington, DC, 20036, US

	NUMBER	PK	DATE	
PATENT INFORMATION:	US 20060130397	A1	20060622	
APPLICATION INFORMATION:	US 2003-519366		20030526	
	WO 2003-AU642		20030526	
			20051013	PCT 371 date
			20051013	PCT 102(e) date

	NUMBER	DATE
PRIORITY APPLN. INFO.:	AU 2002-950123	20020711
FAMILY INFORMATION:	US 20060130397	20060622

DOCUMENT TYPE: Utility
Patent Application - First Publication

FILE SEGMENT: MECHANICAL
APPLICATION

ENTRY DATE: Entered STN: 24 Jun 2006
Last Updated on STN: 24 Jun 2006

NUMBER OF CLAIMS: 23 3 Figure(s).
DESCRIPTION OF FIGURES:

FIG. 1 shows the process according to one preferred aspect of the invention.
FIG. 2 shows the process according to another preferred aspect of the invention.
FIG. 3 shows the process according to yet another preferred aspect of the invention.

AB A soil additive produced from crushing, grinding and blending specified source rocks wherein a final product contains at least three of andesite, basalt, limestone, dolomite and claystone.

CLMN 23 3 Figure(s).
FIG. 1 shows the process according to one preferred aspect of the

invention.
FIG. 2 shows the process according to another preferred aspect of the invention.
FIG. 3 shows the process according to yet another preferred aspect of the invention.

L25 ANSWER 3 OF 3 USPATFULL on STN

ACCESSION NUMBER:	2006:154882 USPATFULL Full-text			
TITLE:	Soil additive			
INVENTOR(S):	Huw, Treers, Stotts Island, New South Wales, AUSTRALIA Sheehy, Donna, Stotts Island, New South Wales, AUSTRALIA			
	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 20060130397	A1	20060622	
APPLICATION INFO.:	US 2003-519366	A1	20030526	(10)
	WO 2003-AU642		20030526	
			20051013	PCT 371 date
	NUMBER		DATE	
PRIORITY INFORMATION:	AU 2002-2002950123		20020711	
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	APPLICATION			
LEGAL REPRESENTATIVE:	Smith Gambrell & Russell, 1850 M Street N W, Suite 800, Washington, DC, 20036, US			
NUMBER OF CLAIMS:	23			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	3 Drawing Page(s)			
LINE COUNT:	1023			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A soil additive produced from crushing, grinding and blending specified source rocks wherein a final product contains at least three of andesite, basalt, limestone, dolomite and claystone.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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FILE 'HCAPLUS' ENTERED AT 11:44:14 ON 12 DEC 2008
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FILE COVERS 1907 - 12 Dec 2008 VOL 149 ISS 25

FILE LAST UPDATED: 11 Dec 2008 (20081211/ED)

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L26           1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  TREERS HUW/AU
L27          16 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ("SHEEHY D"/AU OR "SHEEHY D
                  E"/AU OR "SHEEHY D P"/AU) OR "SHEEHY DONNA"/AU
L28           1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26 AND L27
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L28 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:60612 HCAPLUS Full-text
DOCUMENT NUMBER: 140:81058
TITLE: A soil additive management and remediation of acidic and acid sulfate soils
INVENTOR(S): Treers, Huw; Sheehy, Donna
PATENT ASSIGNEE(S): Australia
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2004007638	A1	20040122	WO 2003-AU642		20030526
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW					
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG					
CA 2492569	A1	20040122	CA 2003-2492569		20030526
AU 2003229102	A1	20040202	AU 2003-229102		20030526
AU 2003229102	B2	20071025			
NZ 538060	A	20050527	NZ 2003-538060		20030526
BR 2003012856	A	20050614	BR 2003-12856		20030526
EP 1539903	A1	20050615	EP 2003-724631		20030526
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
CN 1671822	A	20050921	CN 2003-816475		20030526
CN 1277903	C	20061004			
ZA 2004010337	A	20051017	ZA 2004-10337		20041222
MX 2005PA00437	A	20050722	MX 2005-PA437		20050107
US 20060130397	A1	20060622	US 2005-519366		20051013
PRIORITY APPLN. INFO.:			AU 2002-950123	A	20020711
			WO 2003-AU642	W	20030526

AB A soil additive is produced from crushing, grinding and blending specified source rocks wherein a final product contains at least three of andesite, basalt, limestone, dolomite and claystone. The final product has a modal abundance of basalt in the range of 11-91, limestone 1-59, dolomite 0.025-30, and claystone 0-17.5%. The invention can be used in the following applications: (a) for the development, management and remediation of acidic and acid sulfate soils (ASS); (b) for remediation of alkaline soils, acidic materials and leachate; (c) for use in agricultural operations located on saline soils to enhance plant tolerance to saline conditions; (d) for use in agricultural practices located on ASS and acidic soils to enhance plant tolerance to saline conditions where tidal flushing practices are used to buffer drain acidity; (e) for the management and remediation of industrial waste; and (f) for general use as a partial or full replacement of traditional carbonate derived limestone and liming products to reduce greenhouse gas emissions.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

SEARCH HISTORY

```
     FILE 'AEROSPACE, AQUALINE, CAPLUS, COMPENDEX, CONFSCI, DISSABS,
     ENCOMPLIT, ENCOMPPAT, ENERGY, ENVIROENG, GEOREF, IFIPAT, INSPEC, NTIS,
     OCEAN, PASCAL, SCISEARCH, TULSA, TULSA2, USPATFULL, USPAT2, WATER'
     ENTERED AT 10:17:12 ON 12 DEC 2008
                ACT SOILGEO1A/A
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L1   (    337110)SEA ABB=ON  PLU=ON  BASALT OR TRAP(2A) ROCK OR ((EXTRUSIVE(2A)
                IGNEOUS OR VOLCANIC)(2A)(ROCK)) OR SOLIDIFIED(2A) LAVA
L2   (   1685506)SEA ABB=ON  PLU=ON  LIMESTONE OR CALCITE OR AGGREGATE OR
                ((CARBONATE OR SEDIMENTARY)(2A) (ROCK)) OR CALCIUM(2A)
                CARBONATE OR KEYSTONE OR COQUINA
L3   (    800853)SEA ABB=ON  PLU=ON  DOLOMITE OR DOLOSTONE OR ARCTIC(2A) FROST
                OR ANTIQUE(2A) WHITE OR AGGREGATE OR (CHEMICAL(2A) SEDIMENTARY
                OR CARBONATE)(2A) ROCK OR ((CALCIUM(2A) MAGNESIUM)(2A)(CARBONAT
                E))
L4   (     32038)SEA ABB=ON  PLU=ON  CLAYSTONE OR CLAY(2A) STONE OR ARGILLITE
L5            3 SEA ABB=ON  PLU=ON  SOIL(2A)(ADDITIVE OR AMENDMENT OR IMPROV?
                D STAT QUE
                D IBIB ABS HITSTR L5 1-3
L6       340428 SEA ABB=ON  PLU=ON  L1
L7      2016687 SEA ABB=ON  PLU=ON  L2
L8      1014332 SEA ABB=ON  PLU=ON  L3
L9        33032 SEA ABB=ON  PLU=ON  L4
L10       71631 SEA ABB=ON  PLU=ON  L6 AND (L7 OR L8 OR L9)
L11      987386 SEA ABB=ON  PLU=ON  L7 AND (L8 OR L9)
L12        8132 SEA ABB=ON  PLU=ON  L8 AND L9
                D STAT QUE L5
L13      206819 SEA ABB=ON  PLU=ON  SOIL(2A)(ADDITIVE OR AMENDMENT OR IMPROV?
                OR LIMING OR CONDITION? OR STABALIZE? OR ACID? OR REMEDIAT? OR
                SUPPLEMENT)
L14         177 SEA ABB=ON  PLU=ON  L13 AND L10
                D KWIC
L15         291 SEA ABB=ON  PLU=ON  BASALT (L) L13
L16          86 SEA ABB=ON  PLU=ON  L15 AND (LIMESTONE OR DOLOMITE OR CLAYSTONE
                )
L17          81 SEA ABB=ON  PLU=ON  L14 AND NEUTRAL?
                D SAVE

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                ACT HCAAUTH1/A
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L18(         16)SEA FILE=HCAPLUS ABB=ON  PLU=ON  "SHEEHY D"/AU OR "SHEEHY D E"/
L19(          1)SEA FILE=HCAPLUS ABB=ON  PLU=ON  TREERS H?/AU
L20           1 SEA ABB=ON  PLU=ON  L18 AND L19
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     FILE 'AEROSPACE, AQUALINE, CAPLUS, COMPENDEX, CONFSCI, DISSABS,
     ENCOMPLIT, ENCOMPPAT, ENERGY, ENVIROENG, GEOREF, IFIPAT, INSPEC, NTIS,
     OCEAN, PASCAL, SCISEARCH, TULSA, TULSA2, USPATFULL, USPAT2, WATER'
     ENTERED AT 11:32:27 ON 12 DEC 2008
                E TREERS H/AU
                E E4
                E HUW T/AU
                E TREERS H/AU
L21           1 SEA ABB=ON  PLU=ON  TREERS HUW/AU
                E HUW T/AU
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L23           4 SEA ABB=ON  PLU=ON  L21 OR L22
                E SHEEHY D/AU
L24         141 SEA ABB=ON  PLU=ON  ("SHEEHY D"/AU OR "SHEEHY D A"/AU OR
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                "SHEEHY D N"/AU OR "SHEEHY D P"/AU OR "SHEEHY D T"/AU) OR
                "SHEEHY DJ"/AU OR "SHEEHY DONNA"/AU
L25           3 SEA ABB=ON  PLU=ON  L23 AND L24
                D STAT QUE L25
                D IBIB ABS HITSTR
                D IBIB ABS HITSTR L25 2-3

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                E TREERS H/AU
L26           1 SEA ABB=ON  PLU=ON  TREERS HUW/AU
                E HUW TREERS/AU
                E SHEEHY D/AU
L27          16 SEA ABB=ON  PLU=ON  ("SHEEHY D"/AU OR "SHEEHY D E"/AU OR
                "SHEEHY D P"/AU) OR "SHEEHY DONNA"/AU
                E DONNA SHEEHY/AU
L28           1 SEA ABB=ON  PLU=ON  L26 AND L27

     FILE 'HCAPLUS' ENTERED AT 11:44:14 ON 12 DEC 2008
                D STAT QUE L28
                D IBIB ABS HITSTR L28 1
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6/3,K/1 (Item 1 from file: 6) **Links**
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0257670 **NTIS Accession Number:** PB-196 984/XAB
Treatment for Upgrading Base Materials

Beecroft, G. W. ; Jenkins, J. C.
Oregon State Highway Dept. Materials and Research Div.
Report Number: PUB-69-8
Sep 69 37p
Journal Announcement: GRAI7106
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...cement or asphalt. In Oregon, as in most of the Western states, there are many **aggregate** deposits which are not acceptable for highway construction without treatment because of a tendency of... ...and traffic. Detailed tests were made on four materials representative of most of the substandard **aggregate** types in the state. These were a weathered vesicular **basalt**, a submarine **basalt**, and an **argillite** from three different quarries and a pit gravel containing excessive fines from a river bar...
Descriptors: *Pavement bases; Upgrading; Portland cements; Asphalts; Aggregates; **Basalt**; Particle size; Gravel; **Argillite**; Feasibility; Oregon

6/3,K/3 (Item 1 from file: 35) Links
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01819341 ORDER NO: AADAA-I3004137

Timing of silicification of the Middle Proterozoic Mescal paleokarst and the transition from the Mescal to Troy Quartzite, central Arizona

Author: Skotnicki, Steven Justin
Degree: Ph.D.
Year: 2001
Corporate Source/Institution: Arizona State University (0010)
Source: Volume 6202B of Dissertations Abstracts International.
PAGE 745 . 293 PAGES
ISBN: 0-493-13224-4

Uplift and subaerial exposure of the Mescal **Limestone** (**dolomite**) during the Middle Proterozoic led to a regional karsting event. The karst hosts evidence of... ...Salt River, in the Sierra Ancha, widespread karsting in the Mescal involved pervasive dissolution of **dolomite** and collapse and deflation of the formation as a whole. The result was thinning of... ...fills cracks and cavities on all scales within the karst. Wholesale replacement of the remaining **dolomite** by silica occurred in a northeast-striking belt across the Sierra Ancha from Copper Mountain... ...lsquo;secondary’ silica indicates replacement occurred prior to burial. Widespread replacement of the remaining **dolomite** by granular microcrystalline quartz and close-packed chalcedony spherules was followed by crystallization of cavity... ...void-filling megaquartz. Bedding-parallel cavities filled with siltstone and sandstone derived from the overlying **argillite** and Troy Quartzite attest to the presence of caverns after silicification of the karst. Weathered, hematite-rich **basalt** overlying the Mescal was the most likely source of silica in the silicified paleokarst. Thinly laminated **argillite** interbedded with the **basalt** is also locally strongly silicified and probably represents weathered products of the **basalt** washed into low-lying areas. The extent of near-surface silicification and weathering suggests a...

6/3,K/4 (Item 2 from file: 35) Links
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899755 ORDER NO: AAD85-25950
PETROLOGY OF THE SENTINEL BUTTE FORMATION (PALEOCENE), NORTH DAKOTA (BENTONITE, ASH, VOLCANIC GLASS)

Author: FORSMAN, NELS FRANK
Degree: PH.D.
Year: 1985
Corporate Source/Institution: THE UNIVERSITY OF NORTH DAKOTA (0156)
Source: Volume 4609B of Dissertations Abstracts International.
PAGE 2984 . 236 PAGES

...microprobe techniques. The formation consists of fine-grained materials which generally are classified mineralogically as **volcanic** litharenites or feldspathic litharenites. Most **rock** units in the formation are siltstones and mudstones. Multiple source **rock** types, including **volcanic**, metamorphic, and sedimentary, are represented by mineralogic constituents, but **volcanic rock** fragments are most abundant. Petrographic distinctions between basal and uppermost sandstone units suggest that a... ...is suggested; pore-lining montmorillonite precipitation preceded pore-filling zeolite development, which was followed by **calcite** or **dolomite** growth.

A widespread volcanic ash and bentonite unit in the formation indicates that volcanism accompanied... ...bentonites developed in terrestrial settings. Petrographic comparison of the Sentinel Butte bentonite/ash with other **claystone** units may yet reveal the presence of other bentonites in Paleocene strata. Chemical correlation of...

6/3,K/5 (Item 3 from file: 35) Links
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844493 ORDER NO: AAD84-11235
STRATIGRAPHY AND SEDIMENTOLOGY OF THE UPPER PROTEROZOIC KINGSTON PEAK FORMATION, PANAMINT RANGE, EASTERN CALIFORNIA

Author: MILLER, JULIA MARY GERTRUDE
Degree: PH.D.
Year: 1983
Corporate Source/Institution: UNIVERSITY OF CALIFORNIA, SANTA BARBARA (0035)
Source: Volume 4502B of Dissertations Abstracts International.
PAGE 493 . 417 PAGES

...least 450 m over 25 km horizontal distance, and a facies change from diamictite to **argillite** and graywacke support a southern source. Interbedded pillow **basalt** demonstrates subaqueous volcanism. Overlying laminated **limestone** marks a transgression. Succeeding interbedded **limestone**, graded graywacke and siltstone double in thickness over a few kilometers demonstrating local subsidence and... ...and lodgement till recording the second ice advance. Interfingering between this diamictite and basal Noonday **Dolomite** strata indicates no major pause in sedimentation and a late Proterozoic age for the Kingston ...

6/3,K/6 (Item 4 from file: 35) Links
Dissertation Abs Online
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763993 ORDER NO: AAD81-27777
DEPOSITION AND DIAGENESIS OF GLAUCONITE SANDSTONE, BERRYMORE - LOBSTICK - BIGORAY AREA, SOUTH CENTRAL ALBERTA: A STUDY OF PHYSICAL CHEMISTRY OF CEMENTATION

Author: MESHRI, INDURANI DAYAL
Degree: PH.D.
Year: 1981
Corporate Source/Institution: THE UNIVERSITY OF TULSA (0236)
Source: Volume 4206B of Dissertations Abstracts International.
PAGE 2273 . 178 PAGES

...crystalline siderite are late-stage cements. Secondary porosity is formed from dissolution of feldspar and **volcanic rock** fragments.

Delta platform deposits are mature litharenites having secondary porosity due to dissolution of carbonate cements such as siderite and **calcite**.

Distributary mouth bar deposits are somewhat more mature texturally and mineralogically compared to channel deposits... ...can be classified as litharenites to quartz arenites. Secondary porosity is formed through dissolution of **calcite** cement.

Interdistributary bay deposits are composed of fine-grained sediments. Parallel laminae alternate with fine siltstone and silty **claystone**. X-ray mineralogy showed these samples to contain 7-13% kaolinite and 4-15% illite... ...and illite (late-stage cements), (2) in near equilibrium to undersaturated with respect to quartz, **calcite**, siderite and **dolomite**.

The intermediate to late diagenetic cementation is a function of early diagenetic mineralogy. For example...

6/3,K/10 (Item 4 from file: 89) **Links**
Fulltext available through: STIC Full Text Retrieval Options
GeoRef
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02588860 **Georef:** 03-017208
Title: Oldest Atlantic MORB extrusion records early ridge event on the passive margin of Morocco

Author: Manspeizer, Warren; Puffer, John H.
Corporate Source: Rutgers University, Department of Geological Sciences, Newark, NJ, United States
Monograph Title: Geological Society of America, Northeastern Section, 35th annual meeting
Author: Anonymous
Conference Title: Geological Society of America, Northeastern Section, 35th annual meeting
Conference Location: New Brunswick, NJ, United States,
Conference Date: March 13-15, 2000
Publisher: Geological Society of America (GSA), Boulder, CO, United States
Source: Abstracts with Programs - Geological Society of America vol. 32 no. 1; p. 57
Date: 200002
CODEN: GAAPBC **ISSN:** 0016-7592
Language: English
Abstract: A 9 m thick **basalt** flow has been found within a continuous 300 m thick measured section located within the... ...contact of early Jurassic High Atlas flood basalts that are overlain by 150 m of **sedimentary rock** dominated by sabkha, salt flat sediments including thick gypsum beds, stromatolitic, and oolitic **dolomite**, and terra rosa soil beds. These sabkha sediments are overlain by 70 m of red arkosic sandstone interbedded with more gypsum, overlain by the 9 m **basalt** flow, and another 40 m of sandstone. The upper 30 m of the section consists... ...the first Atlantic marine carbonates and contains coral and brachiopods. The stratigraphic position of the **basalt** flow places it at a tectonic position consistent with post rifting and at the beginning of Atlantic drifting. The **basalt** is gray to black, vesicular, glassy, and pillowed and contains abundant xenoliths of dark red to black meta-**argillite**. The major element chemical composition of each of five samples of the **basalt** is ultrapotassic averaging 7 percent K2O and only 1.2 percent Na2O and resembles rare... ...immobile and insoluble, trace element and rare earth element composition is completely unlike the ultrapotassic **basalt** of Wyoming. The Sr and Rb contents, in particular, average only 50 and 45 ppm in contrast to the 300 and 2700 ppm contents of the Lucite Hills **basalt**. The immobile trace element and rare earth composition instead closely resembles MORB with, for examples... ...1 percent and 75, 230, 310, 7, 2.9 and 0.9 ppm respectively. The **basalt**, therefore, is probably some of the first Atlantic N-type MORB. Nd and Sr isotopic... ...bulk earth intersection of the mantle array, midway between typical MORB and the Lucite Hills **basalt** and initial 87Sr/r86Sr values are higher than typical MORB levels, but are unreliable because...

Coordinates:
Descriptors: Africa; alkaline earth metals; Argana Basin; Atlantic Ocean; Atlas Mountains; **basalt** flows; basalts; High Atlas; igneous rocks; inclusions; isotope ratios; isotopes; Jurassic; Lower Jurassic; Mesozoic; metals...

6/3,K/11 (Item 5 from file: 89) **Links**
Fulltext available through: STIC Full Text Retrieval Options
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02499808 **Georef:** 02-009354
Title: Timing of silicification of the middle Proterozoic Mescal paleokarst and the transition from the Apache Group to the Troy Quartzite in central Arizona

Author: Skotnicki, Steven J.; Knauth, L. Paul
Corporate Source: Arizona State University, Department of Geological Sciences, Tempe, AZ, United States
Monograph Title: Geological Society of America, Rocky Mountain Section, 53rd annual meeting; Geological Society of America, South-Central Section, 35th annual meeting
Author: Anonymous
Conference Title: Geological Society of America, Rocky Mountain Section, 53rd annual meeting; Geological Society of America, South-Central Section, 35th annual meeting
Conference Location: Albuquerque, NM, United States,
Conference Date: April 30-May 2, 2001
Publisher: Geological Society of America (GSA), Boulder, CO, United States
Source: Abstracts with Programs - Geological Society of America vol. 33 no. 5; p. 41
Date: 200104
CODEN: GAAPBC **ISSN:** 0016-7592
Language: English
Abstract: Uplift and subaerial exposure of the Mescal **Limestone** (**dolomite**) during the Middle Proterozoic led to a regional karsting event that hosts evidence of the... ...Salt River in the Sierra Ancha widespread karsting in the Mescal involved pervasive dissolution of **dolomite** and collapse and deflation of the formation as a whole. The result was thinning of... ...fills cracks and cavities on all scales within the karst. Wholesale replacement of the remaining **dolomite** by silica occurred in a northeast-striking belt across the Sierra Ancha. Petrographic examination of... ...within this 'secondary' silica indicates replacement occurred prior to burial. Widespread replacement of the remaining **dolomite** by granular microcrystalline quartz and close-packed chalcedony spherules was followed by crystallization of cavity... ...chalcedony and void-filling megaquartz. Caverns filled with siltstone and sandstone derived from the overlying **argillite** and Troy Quartzite attest to the presence of caverns after silicification of the karst. Weathered, hematite-rich **basalt** overlying the Mescal was the most likely source of silica in the silicified paleokarst. Thinly laminated **argillite** interbedded with the **basalt** is also locally strongly silicified and probably represents weathered products of the **basalt** washed into low-lying areas. The extent of near-surface silicification and weathering suggests a...
Coordinates:
Descriptors: ...Arizona; biota; carbonates; caves; central Arizona;

chalcedony; chemically precipitated rocks; chert; clastic sediments; crystallization; dikes; **dolomite**; fossils; framework silicates; intrusions; karst; Mescal **Limestone**; Mesoproterozoic; microfossils; paleokarst; pits; Precambrian; Proterozoic; residuum; sedimentary rocks; sediments; silica minerals; silicates; silicification; soils...
Research Program Descriptors:

6/3,K/12 (Item 6 from file: 89) **Links**
GeoRef
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02469899 **Georef:** 01-057510
Monograph Title: Elbistan-H 24 Paftasi
Translated Monograph Title: Elbistan H 24 Sheet
Author: Atabey, Esref; Bagirsakci, Selami; Gokkaya, Kenan Y.; Gunal, Sabriye; Kilic, Nevin; Canpolat, Munir
Corporate Source: Turkish Geological Survey, Ankara, Turkey
Publisher: Maden Tetkik ve Arama Genel Mudurlugu, Jeoloji Etutleri Dairesi, Ankara, Turkey
Source: 1:100 000 Olcekli Acinsama Nitelikli Turkiye Jeoloji Haritalari
Date: 1997 15 p.
CODEN: #05005
Report Number: 49
Language: Turkish **Summary Language:** English
Abstract: ...formation of Upper Devonian age and the Yigilitepe formation of Upper Permian age consist of **limestone**-sandstone-shale and **limestone-dolomite** respectively. The other three rock-units, Yuceyurt formation of Middle Jurassic-Upper Cretaceous, Akdere formation... ...and Demiroluk formation of Lutetian age are represented by limestones, hemipelagic-pelagic rocks, and conglomerate-**limestone** -marl-evaporites respectively. These rock-units are overlain disconformably by the Govdelidag formation of Upper... ...unit passes upward into the Gurun formation of Lower Miocene-Lower Pliocene age composed of **claystone**-sandstone-**limestone**. The Kangal formation of Lower Pliocene age consisting of largely clastic rocks is overlain disconformably by the Gobekoren **basalt** of Upper Pliocene-Quaternary age. Of the allochthonous rock-units those to the north are... ...the above-mentioned two rock-units. The allochthonous rock-units to the south are Munzur **limestone** and Binboga formation of Triassic-Cretaceous age. The study area reflects the results of the...
Coordinates:

6/3,K/13 (Item 7 from file: 89) Links
Fulltext available through: STIC Full Text Retrieval Options
GeoRef
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02460042 **Georef:** 01-044041
Title: An approach to the origin of Kesikkopru (Bala-Ankara) iron deposit

Author: Dogan, Bilgin; Unlu, Taner; Sayili, Sonmez
Corporate Source: Maden Tekik ve Arama Genel Mudurlugu, Maden Analizieri ve Teknoloji Dairest, Ankara, Turkey
Corporate Source: ; Ankara Universitesi, Turkey
Publisher: General Directorate of Mineral Research and Exploration (MTA), Ankara, Turkey
Source: Bulletin of the Mineral Research and Exploration Institute of Turkey vol. 120 p. 1-35
Date: 1998
CODEN: BMRXAD **ISSN:** 0026-4563
Language: English
Abstract: ...Mesozoic Kirsehir massive is overlain by sedimentary and volcanic-volcaniclastic rocks that consist of spillitic **basalt**, basaltic tuff, diabase dikes, cherty **limestone**, radiolarite, and mudstone-**limestone** lenses which are transitional with an ophiolitic melange made of crystallized **limestone** blocks and ultramafic-mafic rocks in a basin that was formed during the upper Cretaceous... ...age. These units are unconformably covered by Eocene Cayraz formation consisting of sandy, clayey, fossiliferous **limestone**, Miocene-Pliocene (?) Incik formation composing of siltstone, **claystone**, anhydrite-gypsum alternations, and sandstones with **limestone** and fossiliferous **limestone** blocks, volcanic rocks made of rhyolite and tuffs, Pliocene-Quaternary Kizilimark formation consisting of gravel... ...rocks of mineralization are examined under two main groups as ultramafic rocks consisting of crystallized **limestone** blocks, peridotite, pyroxenite, and serpentinites and mafic rocks consisting of gabbro and diabases while in... ...ilmenite, and sphene. In addition, olivine, pyroxene, tremolite, and actinolite also accompany the ore and **calcite** and **dolomite** are also observed in crack and fracture fillings. Geochemical studies performed on the ore samples...
Coordinates:

6/3,K/14 (Item 8 from file: 89) **Links**
GeoRef
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01973017 **Georef:** 94-55435
Monograph Title: Stratigraphy and sedimentation of the Latah Formation, Spokane County, Washington
Author: Robinson, John D.

Date: 1991 141 p.
University: Eastern Washington University, Cheney, WA, United States,
Degree Level: Master's
Language: English
Abstract: ...60 percent clays, 30 percent silt, and 10 percent sand and gravel. Several types of **claystone** occur in the Latah, the most common being an illite-dominant silty clay comprising about two-thirds of the Latah claystones. A distinctive kaolinitic **claystone** amounts to about one-third, while montmorillonite-rich ashy clay layers total a few percent ... ...and finally coarse sand. Cycle contacts are often sharply defined where clay overlies sand. Since **aggregate** thickness of the Latah Formation is nearly 1450 feet (435 m), ten to twelve such... ...Group basalts (Grande Ronde) at 16.5 Ma. After accumulation of lacustrine sediments, the confining **basalt** dam breached, the lake emptied and renewed downcutting removed much of the Latah before the...
Coordinates:
Descriptors: Cenozoic; Columbia Plateau; Columbia River **Basalt** Group; cyclic processes; depositional environment; lacustrine environment; Latah Formation; lithostratigraphy; Miocene; Neogene; sedimentation; Spokane County...
Research Program Descriptors:

6/3,K/15 (Item 9 from file: 89) **Links**
Fulltext available through: STIC Full Text Retrieval Options
GeoRef
(c) 2007 American Geological Institute. All rights reserved.
00518331 **Georef:** 69-30219
Title: Correlation of Proterozoic strata in the northwestern Canadian Shield

Author: Fraser, J. A.; Tremblay, L. P.
Publisher: National Research Council of Canada, Ottawa, ON, Canada
Source: Canadian Journal of Earth Sciences = Journal Canadien des Sciences de la Terre vol. 6 no. 1 p. 1-9
Date: 1969
CODEN: CJESAP **ISSN:** 0008-4077
Language: English
Abstract: ...correlative: each lies unconformably on Archean basement and is overlain unconformably by kaolinitic sandstone, by **dolomite**, and by Coppermine River **basalt** and sediments; each has **argillite** and quartzite near the base, interbedded **argillite** and **limestone** in the upper parts, and sandstone at the top; each is a shallow water deposit...
Coordinates:

6/3,K/16 (Item 1 from file: 144) **Links**
Pascal
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09444877 PASCAL No.: 91-0235254

Characteristics of the Middle Carboniferous oil pools of Novoyelkhov Field
(Les caracteristiques des accumulations de petrole du Carbonifere moyen dans le Champ de Novoyelkhov)

SUETENKOV V S; SHULIKOVA A G
Journal: Pet. Geol., 1990
, 24 (5-6) 208-210
Language: English

English Descriptors: Oil and gas fields; Carboniferous; Structural traps; Siltstone; **Claystone**; Carbonate rocks; **Argillite**; Reservoir properties; Production; Tatar Arch; Russian Platform; Novoyelkhov Field; Aktash-Novoyelkhov Arch; Structural **trap**; **Carbonate rock**
French Descriptors: Champ hydrocarbure; Carbonifere; Piege structural; Siltstone; **Claystone**; Roche carbonatee; Argilite; Propriete roche magasin; Production; Arc Tatarie; Plateforme Russe

6/3,K/17 (Item 2 from file: 144) **Links**
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09325452 PASCAL No.: 91-0115826

Ordovician gas accumulations in Eastern China
(Accumulations ordoviciennes de gaz naturel dans l'est de la Chine)

DAI JINXING; XIA YINGHE
Minist. Pet. Ind., Sci. Res. Inst. Pet. Explor. and Dev., Beijing, China
Journal: J. Pet. Geol., 1990-01, 13 (1) 79-86

Language: English

...English Descriptors: traps; Reservoir rocks; Carbonate rocks; Source rocks; In situ; Isotopes; C-13/C-12; Condensates; **Claystone**; Bohai Bay; Ordos Basin; Szechwan Basin; Fengfeng Formation; Kelimoli Formation; Majiagou Formation; Nanjinguan Formation; Reserve; Fault; Anticline; Structural trap; Stratigraphic **trap**; Reservoir **rock**; **Carbonate rock**; Parent **rock**; In situ test

...French Descriptors: Roche magasin; Roche carbonatee; Roche mere; Essai in situ; Isotope; C 13-C 12; Condensat; **Claystone**; N280000N410000E1250000E1020000; Essai en place

6/3,K/18 (Item 3 from file: 144) **Links**
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07696817 PASCAL No.: 87-0176329

Petroleum geology of Amu-Dar'ya Province of Soviet Central Asia
(Geologie petroliere de la province Amou Daria d'Asie Sovietique Centrale
)

CLARKE James W
U. S. Geol. Surv., Reston, VA, USA
American Association of Petroleum Geologists, 1986 annual meeting (
Atlanta, GA) 1986-06-15
Journal: AAPG Bull., 1986-05
, 70 (5) 573-574
Language: ENGLISH

English Descriptors: Fuel resources; Amu Darya; Central Asia; Turkmenia; Uzbekistan; Structural traps; Alpine Orogeny; Carbonate rocks; Sandstone; **Claystone**; Siltstone; Salt; Jurassic; Cretaceous; Paleogene; Reservoir rocks; Reefs; Turan Platform; Bukhara; Hydrocarbon; Soviet Central Asia; Structural **trap**; **Carbonate rock**; Reservoir **rock**; Reef

...French Descriptors: Riviere Amou Daria; Asie Centrale URSS; Turkmenistan; Ouzbekistan; Piege structural; Orogenie alpine; Roche carbonatee; Gres; **Claystone**; Siltstone; Sel; Jurassique; Cretace; Paleogene; Roche magasin; Recif; Plateforme Turan

6/3,K/19 (Item 1 from file: 292) **Links**
GEOBASE(TM)
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00892952 **Supplier Number** 2170285
Precious-metal-bearing volcanogenic massive sulfide deposits, Campo Morado, Guerrero, Mexico
Oliver J.; Payne J.; Rebagliati M.
Address: M. Rebagliati, Farallon Resources Ltd., Vancouver, BC, V6C 2V6 , Canada
Email: markr@hdgold.com
Exploration and Mining Geology , 6/2 (119-128) , 1997
Country Of Publication: United Kingdom
ISSN: 0964-1823
Publisher Item Identifier: S0964182398000026
Document Type: Journal ; Article
Languages: English **Summary Languages:** English
No. Of References: 9

Descriptors: ...of felsic flows and heterolithic volcanoclastic rocks or at its contact with overlying chert and **argillite**-sand-stone. The Reforma and El Rey massive sulfide deposits are on the overturned limb... ...chlorite, and sphalerite. Hydrothermal alteration minerals in the stratigraphic footwall are pyrite, quartz, chlorite, ferroan **dolomite**, and ankerite. In the stratigraphic hangingwall, hydrothermal alteration minerals are sericite, **calcite- dolomite**, and lesser clay minerals and quartz. The deposits belong to a low-sulfidation, volcanogenic massive...
Species Descriptors:
massive sulfide; precious metal; **volcanic rock**

6/3,K/20 (Item 2 from file: 292) **Links**
GEOBASE(TM)
(c) 2008 Elsevier B.V. All rights reserved.
00864825 **Supplier Number** 2142043
Mineralogical and geochemnical investigations of bentonite deposits in the northern Kelkit Valley (Resadiye-Yazicik-Bereketli/Tokat), Turkey
Kelkit Vadisi kuzeyindeki (Resadiye-Yazicik-Bereketli/Tokat) bentonit yataklarinin mineralojik ve jeokimyasal incelenmesi
Gumuser G.; Yalcin H.
Yerbilimleri , -/20 (91-110) , 1998
Country Of Publication: Turkey
ISSN: 1301-2894
Document Type: Journal ; Article
Languages: Turkish

Descriptors: ...province. These are consisted of alternation of pyroclastics and their alteration products (tuff, bentonitic tuffaceaous **claystone** and bentonitic **claystone**, with tuffaceous sandstone intercalations) **limestone**-bearing lenses and silicious tuff nodules in the volcanosedimentary sequence Quartz, feldspar, biotite, rarely augite, and porous-fibrous pumices and **volcanic rock** fragments represent volcanogenic constituents, whereas clay, **calcite**, opal-CT, zeolite (clinoptilolite/heulandite, negliable mordenite and analcime) and **dolomite** are diagenetic in origin. Clay fraction includes abundantly smectite, and trace amount of I-S...

6/3,K/21 (Item 3 from file: 292) **Links**

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00208317 **Supplier Number** 0573793

Provenance of the Silurian Elder Sandstone, north-central Nevada.

Girty G.H.; Reiland D.N.; Wardlaw M.S.
Address: Dept of Geological Sciences, San Diego State Univ, San Diego, California 92182, USA.

Geological Society of America Bulletin , 96/7 (925-930) , 1985
Document Type: Journal
Languages: English

Descriptors: Rock fragments in the Elder Sandstone were derived from Paleozoic **carbonate rock**, **argillite**, chert, quartzite, and intermediate to basic **volcanic rock**. Feldspar, zircon, and quartz probably were derived initially from Precambrian crystalline rocks. The location of...

Serial#: 10519366
STN & DIALOG

11/3,K/3 (Item 2 from file: 34) **Links**
Fulltext available through: STIC Full Text Retrieval Options
SciSearch(R) Cited Ref Sci
(c) 2008 The Thomson Corp. All rights reserved.
09588735 **Genuine Article#:** 426AK **No. References:** 25
Soil properties of Imperata grasslands and prospects for tree-based farming systems in Northeast Luzon, The Philippines

Author: Snelder DJ (REPRINT)
Corporate Source: Ctr Environm Sci,Cagayan Valley Program Environm & Dev,POB 9518/NL-2300 RA Leiden//Netherlands/ (REPRINT); Ctr Environm Sci,Cagayan Valley Program Environm & Dev,NL-2300 RA Leiden//Netherlands/
Journal: AGROFORESTRY SYSTEMS , 2001 , V 52 , N1 , P 27-40
ISSN: 0167-4366 **Publication date:** 20010000
Publisher: KLUWER ACADEMIC PUBL , SPUIBOULEVARD 50, PO BOX 17, 3300 AA DORDRECHT, NETHERLANDS
Language: English **Document Type:** ARTICLE (ABSTRACT AVAILABLE)
Abstract: ...prospects for tree-based farming systems in northeastern Luzon. Soils are developed over Miocene- Pliocene **sedimentary rock** and Plio-Pleistocene **volcanic** and fluvial deposits. There is a clear distinction between relatively well-developed fertile soils (Cambisols... ...surface crusting, gully formation, limited soil depth, and stony surfaces. It is argued that variable **soil conditions** and topography are inadequately considered in regional attempts to develop and rehabilitate grasslands. Fertile, low...
Identifiers--

11/3,K/4 (Item 3 from file: 34) **Links**
Fulltext available through: STIC Full Text Retrieval Options
SciSearch(R) Cited Ref Sci
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04962750 **Genuine Article#:** UV661 **No. References:** 73
CHANGES IN MICROBIAL BIOMASS, RESPIRATION AND NUTRIENT STATUS OF BEECH (FAGUS-SYLVATICA) LEAF-LITTER PROCESSED BY MILLIPEDES (GLOMERIS-MARGINATA)

Author: MARAUN M; SCHEU S
Corporate Source: UNIV GOTTINGEN,INST ZOOL 2,ABT OKOL,BERLINER STR 28/D-37073 GOTTINGEN//GERMANY/
Journal: OECOLOGIA , 1996 , V 107 , N1 (JUL) , P 131-140
ISSN: 0029-8549
Language: ENGLISH **Document Type:** ARTICLE (Abstract Available)
Abstract: ...basal respiration and metabolic quotient of litter-material from three different beechwood sites of a **basalt** hill forming a gradient from **basalt** (upper part of the hill) to **limestone** (lower part of the hill) were determined each season (February, May, August and November). The...
Identifiers-- ...**SOIL** ARTHROPODS; ENVIRONMENTAL-**CONDITIONS**; PHYSIOLOGICAL METHOD; ERGOSTEROL CONTENT; CONIFEROUS LITTER; EARTHWORM FECES; ORGANIC-MATTER; FUNGAL BIOMASS; FOREST SOILS; DECOMPOSITION

11/3,K/5 (Item 4 from file: 34) **Links**
Fulltext available through: STIC Full Text Retrieval Options
SciSearch(R) Cited Ref Sci
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04214196 **Genuine Article#:** RP035 **No. References:** 71
METHODS FOR THE STUDY OF ROCK-INHABITING MICROORGANISMS - A MINI REVIEW

Author: HIRSCH P; ECKHARDT FEW; PALMER RJ
Corporate Source: CHRISTIAN ALBRECHTS UNIV KIEL,INST ALLGEMEINE MIKROBIOL,BOTAN GARTEN 1-9/D-24118 KIEL//GERMANY/; UNIV TENNESSEE,OAK RIDGE NATL LAB,CTR ENVIRONM BIOTECHNOL/KNOXVILLE//TN/37932
Journal: JOURNAL OF MICROBIOLOGICAL METHODS , 1995 , V 23 , N2 (AUG) , P 143-167
ISSN: 0167-7012
Language: ENGLISH **Document Type:** REVIEW (Abstract Available)
Abstract: ...and contributions to rock deterioration. Many different rock types are affected: sandstone, granite, gneiss, amphibolite, **limestone**, **basalt**, dolerite, or even bricks and their glazes. Microbial rock degradation is not dependent on climate...
Identifiers-- ...RIBOSOMAL-RNA; CRYPTOENDOLITHIC MICROBIOTA; OLIGONUCLEOTIDE PROBES; SUBSURFACE SEDIMENTS; COMMUNITY STRUCTURE; GAS-CHROMATOGRAPHY; ANTARCTIC DESERT; BIOMASS; **SOIL; ACIDS**

11/3,K/6 (Item 5 from file: 34) **Links**
Fulltext available through: STIC Full Text Retrieval Options
SciSearch(R) Cited Ref Sci
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02712802 **Genuine Article#:** LY405 **No. References:** 66
METAMORPHIC ALTERATION OF A PRECAMBRIAN (2.2 GA) PALEOSOL FROM SOUTH-AFRICA REVEALED BY BACKSCATTERED ELECTRON IMAGING

Author: RETALLACK GJ; KRINSLEY DH
Corporate Source: UNIV OREGON,DEPT GEOL SCI/EUGENE//OR/97403
Journal: PRECAMBRIAN RESEARCH , 1993 , V 63 , N1-2 (SEP) , P 27-41
ISSN: 0301-9268
Language: ENGLISH **Document Type:** ARTICLE (Abstract Available)
Abstract: ...formed on an upward thinning and fining sequence of sandstone and shale, rather than on **basalt**. On this assumption, the profile has gained iron compared with its shaly parent material, rather than lost iron compared with **basalt**. This may be an indication of greater oxygenation of the atmosphere than previously thought. Possible...
Identifiers-- ...STABLE ISOTOPIC SIGNATURE; TERRESTRIAL PLANT COVER; ATMOSPHERIC COMPOSITION; SUBAERIAL DIAGENESIS; MESCAL **LIMESTONE**; CENTRAL ARIZONA; ILLITE REACTION; EASTERN ALPS; ROCK VARNISH; RELEVANCE
Research Fronts: ...INCLUSION CONSTRAINTS; HIGH-GRADE METAMORPHISM; NORTHERN NORWAY; HYDROTHERMAL MINERALS)
91-6406 001 (SUSTAINING PRODUCTIVE PASTURES; **SOIL ACIDIFICATION**; WHITE CLOVER; ROOT DISTRIBUTION)
91-6544 001 (COMPOSITION OF PERMIAN SEAWATER; PHANEROZOIC MARINE CARBONATE ROCKS...
Cited References:

11/3,K/9 (Item 2 from file: 89) **Links**
Fulltext available through: STIC Full Text Retrieval Options
GeoRef
(c) 2007 American Geological Institute. All rights reserved.
02496525 **Georef:** 02-005900
Corporate Source: ; U. S. Geological Survey, Hawaiian Volcano Observatory, United States
Monograph Title: Controls on palagonitization versus pedogenic weathering of basaltic tephra; evidence from the consolidation and geochemistry of the Keanakako'i Ash Member, Kilauea Volcano
Author: Schiffman, Peter; Spero, Howard J.; Southard, R. J.; Swanson, D. A.
Corporate Source: University of California at Davis, Department of Geology, Davis, CA, United States
Publisher: American Geophysical Union and The Geochemical Society, United States
Source: Geochemistry, Geophysics, Geosystems - G 3 vol. 1
Date: 20000825 paper number 1999GC000068 p.
ISSN: 1525-2027
Language: English
Note: Accessed on September 4, 2001
URL: http://g-cubed.org
Abstract: ...of vitric tephras from the <500-year-old Keanakako'i Ash Member of the Puna **Basalt** have occurred only adjacent to caldera-bounding faults. **Calcite** intergrown with palagonitized glass has delta (super 18) O values indicative of a hydrothermal origin. Whereas the delta (super 13) C of the **calcite** suggests that it has sequestered carbon from atmospheric as well as mantle sources, radiocarbon dates... ...Caldera. Elsewhere, Keanakako'i tephras are weathering into pedogenic products that closely reflect modern environmental **conditions**. Under **acidic soil conditions** (pH<6.0), tephra is undergoing dissolution, with the development of opaline crusts on outcrop ...
Coordinates:

11/3,K/11 (Item 1 from file: 118) **Links**
ICONDA-Intl Construction
(c) 2008 Fraunhofer-IRB. All rights reserved.
0116636 **ICONDA Accession Number:** 1986(12):1001699 ICONDA
Mechanical stabilization for the control of frost heave

Kettle R.J (Author) ; MacCabe E.Y (Author)
Mitteilungen aus dem Institut fuer Regionalpolitik und Verkehrswissenschaft der Universitaet Freiburg
v.12, no.4 p.899-905 , figs.,tabs.,refs
Publication Date: 19850000
Language: English **Summary Language:** English; French
...a highly susceptible mixture of sand and ground chalk. Three types of coarse particle (slag, **basalt**, **limestone**) were used as the stabilizing agent, and these were each subdivided into two particle groups ... ...the selected coarse aggregates produced various non-frost-susceptible mixtures. The influence of the coarse **aggregate** was very dependent on **aggregate** type but less dependent on **aggregate** size. The data have been examined to assess the role of these coarser particles in... ...soil. Heaving pressures are also reported and are examined in relation to the amount of **aggregate** added, nature of the aggragate, and particle size. The addition of coarse aggreagte to the...
Descriptors: engineering geology; soil investigation; foundation engineering; **soil improvement**; stabilization; **soil** stabilisation; frost heave; frost damage; frost action; particle size; particle size distribution; soil type; laboratory...

11/3,K/13 (Item 1 from file: 144) **Links**
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15185435 PASCAL No.: 01-0350434

Soil properties of Imperata grasslands and prospects for tree-based farming systems in Northeast Luzon, The Philippines

SNELDER D J
Cagayan Valley Program on Environment and Development, Centre of Environmental Science, P.O. Box 9518, 2300 RA Leiden, Netherlands Journal: Agroforestry systems, 2001, 52 (1) 27-40

Language: English

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... prospects for tree-based farming systems in northeastern Luzon. Soils are developed over Miocene-Pliocene **sedimentary rock** and Plio-Pleistocene **volcanic** and fluvial deposits. There is a clear distinction between relatively well-developed fertile soils (Cambisols..... surface crusting, gully formation, limited soil depth, and stony surfaces. It is argued that variable **soil conditions** and topography are inadequately considered in regional attempts to develop and rehabilitate grasslands. Fertile, low...

11/3,K/14 (Item 2 from file: 144) **Links**
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12744773 PASCAL No.: 96-0457694

Distribution of clay minerals and their genesis in ferruginous and black soils occurring in close proximity on Deccan **basalt** plateau of Nagpur District, Maharashtra

PILLAI M; PAL D K; DESHPANDE S B
Division of Soil Resource Studies, National Bureau of Soil Survey and Land Use Planning, Amravati Road, Nagpur, Maharasthra, 440010, India Journal: Journal of the Indian Society of Soil Science, 1996, 44 (3) 500-507
Language: English

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...minerals and their genesis in ferruginous and black soils occurring in close proximity on Deccan **basalt** plateau of Nagpur District, Maharashtra
... are preserved to the present because of termination of the humid climate. The relatively higher **soil** pH **condition** of black soils has caused hydroxy-interlayering in vermiculite, and alteration product of mica. Chlorite...

...English Descriptors: clay minerals; Red soils; smectite; Ferruginous soils; Vertisols; morphometry; physical properties; chemical properties; particles; pH; **calcium carbonate**; cation exchange capacity; X-ray diffraction analysis

...French Descriptors: mineral; Sol rouge; Smectite; Sol ferrugineux; Vertisol; Morphometrie; Propriete physique; Propriete chimique; Matiere particulaire; PH; **Carbonate calcium**; Capacite echange cation; Diffraction RX

11/3,K/15 (Item 1 from file: 292) **Links**
GEOBASE(TM)
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01042927 **Supplier Number** 2335260
Mineralogical and chemical investigation of soil formed on basaltic bentonite at Egyhazaskeszo, Transdanubia, Hungary
Hartyani Z.; Pecsi I.; Merenyi L.; Szabo S.; Szauer J.; Szilagyi V.
Address: Z. Hartyani, University of Veszprem, Dept. of Earth Environ. Sciences, PO Box 158, Veszprem H-8201 , Hungary
Email: csikosne@almos.vein.hu
Acta Geologica Hungarica , 43/4 (431-445) , 2000
Country Of Publication: Hungary
ISSN: 0236-5278
Document Type: Journal ; Article
Languages: English **Summary Languages:** English
No. Of References: 35

Descriptors: ...At depths of 70-80 cm, as well as 80-90 cm, high amounts of **calcite** were found. On the top of the soil layers, at depths of 0-10 cm... ...basaltic bentonite, quartz, muscovite and feldspar are interpreted to be decomposing minerals, and montmorillonite, chlorite, **calcite** and gypsum as authigenic phases. Trace elements are mainly concentrated in the smallest grain-size... ...This is also an explanation for the high efficiency of alginite and basaltic bentonite as **soil-improving** raw material in Hungary.
Species Descriptors:
mineralogy; pedogenesis; soil; **basalt**; bentonite; weathering

11/3,K/16 (Item 2 from file: 292) **Links**
GEOBASE(TM)
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01040518 **Supplier Number** 2335900
Soil properties of Imperata grasslands and prospects for tree-based farming systems in Northeast Luzon, the Philippines
Snelder D.J.
Address: D.J. Snelder, Cagayan Valley Prog. Environ./Devmt., Centre of Environmental Science, P.O. Box 9518, 2300 RA Leiden , Netherlands
Email: Snelder@cml.leidenuniv.nl
Agroforestry Systems , 52/1 (27-40) , 2001
Country Of Publication: Netherlands
ISSN: 0167-4366
Document Type: Journal ; Article
Languages: English **Summary Languages:** English
No. Of References: 25

Descriptors: ...prospects for tree-based farming systems in northeastern Luzon. Soils are developed over Miocene-Pliocene **sedimentary rock** and Plio-Pleistocene **volcanic** and fluvial deposits. There is a clear distinction between relatively well-developed fertile soils (Cambisols... ...surface crusting, gully formation, limited soil depth, and stony surfaces. It is argued that variable **soil conditions** and topography are inadequately considered in regional attempts to develop and rehabilitate grasslands. Fertile, low...
...Information systems, climatic and **soil conditions**)
73.9.1...
RECORD HISTORY:

11/3,K/17 (Item 3 from file: 292) Links

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00478573 **Supplier Number** 0886808

Initial compensation of acidic deposition in forest ecosystems by different rock meals

Schuler G.

Address: Forest Research Institute, Rhineland-Palatinate, D 6751 Trippstadt, Germany

Water, Air, & Soil Pollution , 54/- (435-444) , 1990 1991

Document Type: Journal

Languages: English

Descriptors: ...the particle size fractions than on the contents of bases. Comparisons of the effects of **dolomite**, enriched **volcanic** silicate **rock** meal and **volcanic** silicate **rock** meal as well as **dolomite** suspensions and coarsely ground **dolomite** in field experiments confirmed the laboratory tests to a large extent. The following short-term...

Species Descriptors:

acidic deposition; forest ecosystem; rock meal; **soil amendment**; buffer substance

Serial#: 10519366
STN & DIALOG

SEARCH HISTORY

```
Set     Items   Description
S1      89283   S BASALT OR (TRAP(2N)ROCK) OR ((EXTRUSIVE(2W)IGNEOUS
OR VOLCANIC)(5N)(ROCK)) OR (SOLIDIFIED(2N)LAVA)
S2     490685   S LIMESTONE OR CALCITE OR AGGREGATE OR ((CARBONATE OR
SEDIMENTARY)(2N)(ROCK)) OR (CALCIUM(2N)CARBONATE) OR KEYSTONE OR
COQUINA
S3     249952   S DOLOMITE OR DOLOSTONE OR ARCTIC(2A)FROST OR
(ANTIQUE(2N)WHITE) OR AGGREGATE OR (CHEMICAL(2N)SEDIMENTARY OR
CARBONATE)(2N)ROCK OR ((CALCIUM(2N)MAGNESIUM)(2N)(CARBONATE))
S4      12277   S CLAYSTONE OR CLAY(2A)STONE OR ARGILLITE
S5          0   S (SOIL(2N)(ADDITIVE OR AMENDMENT OR IMPROV? OR
LIMING OR CONDITION? OR STABALIZE? OR ACID? OR REMEDIAT?)) AND (S1
AND S2 AND S3 AND S4)
S6         21   S S1 AND S2 AND S3 AND S4

?  S S1 AND (S2 OR S3 OR S4)
        89283   S1
       490685   S2
       249952   S3
        12277   S4
S7       5673   S S1 AND (S2 OR S3 OR S4)

?  S (SOIL(2N)(ADDITIVE OR AMENDMENT OR IMPROV? OR LIMING OR
CONDITION? OR STABALIZE? OR ACID? OR REMEDIAT?)) AND S7
      1347742   SOIL
       280579   ADDITIVE
        35899   AMENDMENT
      4750852   IMPROV?
         8717   LIMING
      6734975   CONDITION?
           42   STABALIZE?
      3965520   ACID?
       116839   REMEDIAT?
       113655   SOIL(2N)((((((ADDITIVE OR AMENDMENT) OR IMPROV?) OR
LIMING) OR CONDITION?) OR STABALIZE?) OR ACID?) OR REMEDIAT?)
         5673   S7
S8         17   S (SOIL(2N)(ADDITIVE OR AMENDMENT OR IMPROV? OR
LIMING OR CONDITION? OR STABALIZE? OR ACID? OR REMEDIAT?)) AND S7

?  S (S2 AND (S3 OR S4)) AND (SOIL(2N)(ADDITIVE OR AMENDMENT OR
IMPROV? OR LIMING OR CONDITION? OR STABALIZE? OR ACID? OR REMEDIAT?))
Processing
Processing
       490685   S2
       249952   S3
        12277   S4
      1347742   SOIL
```

```
       280579   ADDITIVE
        35899   AMENDMENT
      4750852   IMPROV?
         8717   LIMING
      6734975   CONDITION?
           42   STABALIZE?
      3965520   ACID?
       116839   REMEDIAT?
       113655   SOIL(2N)((((((ADDITIVE OR AMENDMENT) OR IMPROV?) OR
LIMING) OR CONDITION?) OR STABALIZE?) OR ACID?) OR REMEDIAT?)
S9       2126   S (S2 AND (S3 OR S4)) AND (SOIL(2N)(ADDITIVE OR
AMENDMENT OR IMPROV? OR LIMING OR CONDITION? OR STABALIZE? OR ACID?
OR REMEDIAT?))

?  S (S3 OR S4) AND (SOIL(2N)(ADDITIVE OR AMENDMENT OR IMPROV? OR
LIMING OR CONDITION? OR STABALIZE? OR ACID? OR REMEDIAT?))
       249952   S3
        12277   S4
      1347742   SOIL
       280579   ADDITIVE
        35899   AMENDMENT
      4750852   IMPROV?
         8717   LIMING
      6734975   CONDITION?
           42   STABALIZE?
      3965520   ACID?
       116839   REMEDIAT?
       113655   SOIL(2N)((((((ADDITIVE OR AMENDMENT) OR IMPROV?) OR
LIMING) OR CONDITION?) OR STABALIZE?) OR ACID?) OR REMEDIAT?)
S10      2335   S (S3 OR S4) AND (SOIL(2N)(ADDITIVE OR AMENDMENT OR
IMPROV? OR LIMING OR CONDITION? OR STABALIZE? OR ACID? OR REMEDIAT?))

?  S S8 NOT S6
           17   S8
           21   S6
S11        17   S S8 NOT S6

?  T 11/3,K/ALL
```

Answer sets (S6 and S11 for Dialog) were modified to reflect dates less than July, 2002.